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Guidance for the Reregistration of Pesticide Products Containing EPTC as the Active Ingredient

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GUIDANCE FOR THE REREGISTRATION OF PESTICIDE PRODUCTS CONTAINING AS THE ACTIVE INGREDIENT

EPTC
(041401)

CASE NUMBER 0064

CAS 759-94-4

ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF PESTICIDE PROGRAMS

WASHINGTON, D. C.   20460

September 30, 1983

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INTRODUCTION

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA Section 3(g)), as amended in 1978, directs EPA to reregister all pesticides as expeditiously as possible. Each registrant of a manufacturing use product of the active ingredient who wishes to continue to sell or distribute that product must apply for reregistration.

To fulfill this Congressional mandate, we have established the Registration Standards program which will review all pesticide active ingredients first registered before January 1, 1977. These pesticides will be reviewed in use clusters which are prioritized on the basis of a ranking scheme giving preference to pesticides used on food and feed crops.

The Registration Standards program involves a thorough review of the scientific data base underlying pesticide registrations and an identification of essential but missing studies which may not have been required when the product was initially registered or studies that are now considered insufficient. Our reassessment results in the development of a regulatory position, contained in this document, on each pesticide and its uses. The regulatory position may require the registrant to modify product labels to provide additional precautionary statements, restrict the use of the pesticide to certified applicators, provide reentry intervals, modify uses or formulation types, specify certain packaging limitations, or other requirements to assure that proper use of the pesticide poses no potential adverse effects to human health or the environment.

The scientific review, which is not contained herein but is available upon request, concentrates on the technical grade of the active ingredient and identifies missing generic data. However, during the review of these data we are also looking for potential hazards that may be associated with the formulated (end-use) products that contain the active ingredient. If we find serious concerns, we will bring formulated products under the provisions of the Registration Standards program to the extent necessary to protect the public.

EPA has the authority under FIFRA §3(c)(2)(B) to require that certain registrants submit generic data that will answer our questions regarding the hazard that may result from the intended use of the pesticide under review. Further, §3(c)(2)(B) provides that these data are to be submitted by those registrants who do not qualify for the formulator's exemption [FIFRA §3(c)(2)(D)]. Normally, this means that the registrants who are responsible for filling the data gaps are the manufacturing-use product producers (basic suppliers of the active ingredient). However, end-use producers will not qualify for the formulator's exemption if the source of their active ingredient: (1) is not registered with EPA, and/or (2) is produced by the registrant's firm, or a firm which has ownership in common with the registrant's firm. These end-use producers can qualify for the formulator's exemption if they change their source of supply to a registered source, provided the source does not share ownership in common with the registrant's firm. If the end-use product registrant decides to switch sources, a new Confidential Statement of Formula, EPA Form 8570-4, must be submitted to the appropriate Product Manager within 90 days of receipt of this Guidance Document. The chart on the following page shows what is generally required of those who do and do not qualify for the formulator's exemption in the Registration Standards program.

If you decide to request the Agency to discontinue the registration of any of your products subject to the reregistration requirements of this Guidance Document, please notify the Product Manager named in the cover letter, within 90 days from the receipt of this document, that you wish to voluntarily cancel the registration(s). If you decide to maintain your product registration(s), you must provide the information described in the following pages within the timeframes outlined. EPA will issue a notice of intent to cancel or suspend the registration of any currently registered product if you fail to comply with the requirements set forth in this Guidance Document.

This Guidance Document will be supplemented by EPA with additional information about compliance with data support requirements. In Monsanto v. Administrator, EPA was recently enjoined from implementing in any way the "mandatory data licensing" aspects of §3(c)(1)(D) of FIFRA. EPA is assessing the implications of the injunction for the reregistration process. Because this situation is currently unresolved, EPA has decided to proceed with the requirements in this Guidance Document which do not relate to compliance with the §3(c)(1)(D) provisions and to supplement the Document with additional guidance when circumstances permit. Failure to comply with the provisions of the subsequent guidance will also result in issuance by EPA of an intent to cancel the affected product registration(s).

Registrants are reminded that §6(a)(2) of FIFRA requires you at any time to submit factual information raising concerns of possible unreasonable adverse effects of a pesticide. You should notify the Agency of interim results of studies in progress if those results show possible adverse effects.

PRODUCTS SUBJECT TO THE REGISTRATION STANDARDS PROGRAM	ACTION(S) REQUIRED TO MAINTAIN REGISTRATION
I. Products That Do Not Qualify For The Formulator's Exemption	
A. Single Active Ingredient Products*	These products must be reregistered. To obtain reregistration, labeling, packaging and data requirements must be satisfied in accordance with the Registration Standards Guidance Document.
B. Multiple Active Ingredient Products	These products will not be reregistered at this time. However, generic data required to continue the registration of the active ingredient under review, as described in the Registration Standards Guidance Document, will be required and some labeling precautions may also be required.
II. Products That Do Qualify For The Formulator's Exemption	Only when additional restrictions or labeling are needed to protect man or the environment will these products be subject to the Registration Standard requirements. Affected products will be dealt with in a variety of ways, including but not limited to the Label Improvement Program and special intent to cancel notices.

* End-use products of registrants who also produce a manufacturing-use product will not be required to be reregistered provided that registrant fulfills the requirements specified in the Guidance Document for manufacturing-use product(s). Such end-use products will be subject to the labeling changes required for products in "II" above. If there are no manufacturing-use products registered by any company end-use products will be required to be reregistered.

NOTE: If all registrants in "I" above fail to meet the requirements in I-A and B above, then the registrants in "II" lose their right to qualify for the formulator's exemption and become subject to the requirements in I-A and B.

I. REGULATORY POSITION AND RATIONALE

A. Introduction

This chapter describes the regulatory position of the Environmental Protection Agency ("the Agency") on EPTC based on an evaluation of all registered manufacturing-use products (MUP's) containing EPTC as the sole active ingredient. Future requests for registrations of substantially similar products will be covered by this standard. Dissimilar products will require amendments to the standard. This document provides the rationale for the Agency's position and the criteria for reregistration. It also discusses labeling requirements, tolerances, and Federal registrations granted under section 3 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

"EPTC" is the accepted common name for the compound S-ethyl dipropylthiocarbamate ($C_9H_{19}NOS$), recognized by the Weed Science Society of America. The trade and other names used for EPTC include: Chemolimpex®, Eptam®, and Eradicane®. The Chemical Abstracts Service (CAS) Registry Number is 759-94-4. The Office of Pesticide Programs internal control number (EPA Shaughnessy number) is 041401.

B. Use Profile

EPTC is a selective "thiocarbamate" herbicide that provides preemergent control of certain annual grasses, broadleaf weeds such as quackgrass, bermudagrass, and nutsedge on field, vegetable, orchard, ornamental, and noncrop sites. For most uses EPTC must be incorporated in the soil by discing, applied with subsurface injection equipment, or metered into irrigation water to obtain proper weed control. EPTC controls weeds by interfering with the growth of meristematic regions of grass leaves and affects the DNA, RNA, and protein synthesis. Established (emerged) weeds are not controlled by EPTC.

EPTC was patented by Stauffer Chemical Company (US Patent No. 2,913,327) in 1966, and was first registered for use in 1969. Technical EPTC is being produced in the United States by Stauffer Chemical Company of Richmond, California. Chemolimpex®, a technical EPTC (TGAI) is manufactured in Hungary and is being imported into the United States by PPG Industries of Pittsburgh, Pennsylvania.

EPTC is available as a technical material, at 98.5% active ingredient and as a manufacturing use product containing 87.7% EPTC for formulation of EPTC end-use formulations or as manufacturing use products. As a sole active ingredient, EPTC is available in granular and emulsifiable liquid concentrate formulations.

C. Regulatory Position

Based on a review and evaluation of the available data and other relevant information on EPTC, the Agency has made the following determinations:

1. Manufacturing-use pesticide products containing EPTC as a sole active ingredient may be registered for sale, distribution, formulation and use in the United States, subject to the terms and conditions specified in this standard. Applicants having products not conforming to this standard must apply to amend the document so those products containing EPTC may be registered and reregistered under this standard. Mixtures and end-use products containing EPTC are not covered under this standard.

2. Available data do not show that any of the risk criteria listed in Section 162.11(a) of Title 40 of the U.S. Code of Federal Regulations (40 CFR 162.11(a)) have been met or exceeded for the uses of EPTC specified in this standard.

3. Studies on butylate (a close structural relative of EPTC), as well as studies on EPTC itself, have indicated effects of impaired clotting function in test animals. Therefore, the protocols for related studies of EPTC need to reflect the conncerns raised by the clotting data (see discussion under Regulatory Rationale, item #1).

4. Additional data are required before the Agency can fully assess the environmental fate of EPTC and the exposure of humans and nontarget organisms to EPTC.

5. Data to support the establishment of reentry protection standards are not required because the Agency has determined, based on the use patterns and available toxicity for EPTC, that the criteria in 40 CFR 158.40 have not been met.

6. Since the Agency has reassessed the tolerance levels of EPTC in or on the commodities listed in 40 CFR 180.117, the proposed tolerance for each commodity is 0.1 ppm (negligible).

7. Registrants must provide or agree to develop additional as specified in the tables attached to this standard, in order to maintain existing registrations or to permit new EPTC registrations.

D. Regulatory Rationale

The Agency has determined the following:

1. The available data indicate that technical EPTC has relatively low acute oral, dermal, and inhalation toxicities, and low potential for primary dermal irritation. Due to the high potential for eye irritation from EPTC exposure, technical EPTC is classified under Toxicity Category II for primary eye irritation. Reviews of two subcronic studies in rats (00022101 and 00022358) reported effects on various clotting parameters. In addition, reviewers of acute studies (oral, dermal, and inhalation) revealed effects indicative of impaired blood clotting functions, e.g. congested liver, kidneys and adrenals, lung erythema (00024548), blood-like stains around the urogenital area (00043650), blood stained muzzle, red fluid in urinary bladder, reddened intestinal mucosa, red discharge from mouth (00084437), and reddened lungs (00072794).

   Therefore, any additional studies on EPTC must include a test for clotting function and hematology in the protocol design to better define the effects on clotting and clearly establish a no-observed-effect-level (NOEL).

   Specifically, the following studies must address the blood-clotting issue:

   a. 1-year or longer dog feeding study,
   b. Rat oncogenicity study,
   c. Teratology study in two species,
   d. 2-generation reproduction study.

   The registrant is advised to submit the test protocols for the above studies to the Agency prior to their initiation.

   The requirement for a subchronic neurotoxicity study is being deferred until an acute neurotoxicity study has been completed in order to determine whether the subchronic study is necessary.

   Studies identifying metabolism of EPTC in male and female rats (00021831 and 00021832) were reviewed and satisfied the current data requirements for animal metabolism.

2. Under 40 CFR 158.145, technical EPTC data requirements dictate that an avian oral LD-50 study must be done. However, the use patterns and available wildlife toxicity for EPTC show that birds are exposed to little or no hazard because EPTC is incorporated into the soil immediately prior or just after planting. A dietary study on bobwhite quail had an LC-50 in excess of 20,000 ppm. The low toxicity and soil incorporation of EPTC should reduce exposure and provide an adequate safety margin.

Problems with aquatic organisms or fish are not anticipated because an estimated environmental concentration of 0.141 ppm in EPTC runoff is well below the LC-50 for aquatic organisms.

3. When soil residues of EPTC are taken up by plants in the treated area, these residues are rapidly metabolized to carbon dioxide and common plant constituents, e.g., amino acids and fructose, thus leaving negligible residue levels in the plant tissues.

4. It is not the Agency's policy to cancel or to withhold registration merely because data are missing or inadequate (see sections 3(c)(2)(B) and 3(c)(7) of the FIFRA). Rather, publication of this standard provides a mechanism for identifying data needs and registration under the standard and allows for the upgrading of labels during the period in which the required data are being developed. These data will be reviewed and evaluated when they are received and the Agency will determine at that time whether they will affect the registration(s) of EPTC.

E. Criteria for Registration Under this Standard

To be subject to this standard, products must meet the following conditions:

1. Contain EPTC as the sole active ingredient, and

2. Conform to the acute toxicity limits, product composition, and use pattern requirements listed in Section F of this document.

The applicant for registration or reregistration of products subject to this standard must comply with all terms and conditions described in it, including committing to fill data gaps on a schedule agreed to by both this agency and the applicant. All applicants for registration under this standard must follow the instructions contained in this standard and complete and submit the appropriate forms within the specified time.

F. Acceptable Ranges and Limits

1. Product Composition Standard

Technical grade products must contain at least 98.5% EPTC as the sole active ingredient. Each manufacturing-use product formulation proposed for registration must be fully described with an appropriate certification of limits. In addition, the active ingredient found in the manufacturing-use products must be substantially similar to that in currently registered technical products. Any manufacturing-use product not meeting these requirements will be considered a new product and will not be registerable under this standard.

2. Acute Toxicity Limits

The Agency will consider registration of technical grade and manufacturing-use products containing EPTC with acute toxicity category II for primary eye irritation and toxicity category III for acute oral, dermal, inhalation, and primary dermal irritation toxicities provided that the labeling of those products bears appropriate precautionary statements.

3. Use Patterns

To be registered under this standard, manufacturing-use products containing EPTC may be labeled for formulation only into end-use products for herbicides used for the control of certain annual grasses, broadleaf weeds and perennial orchard, ornamental, and noncrop sites. For most uses, EPTC must be incorporated into the soil by discing, applied with subsurface injection equipment, or metered into irrigation water to obtain proper weed control.

G. Required Labeling

All technical grade, manufacturing-use, and end-use products containing EPTC must bear appropriate labeling stating the sites of use. Other portions of the guidance package contain specific information regarding label requirements as specified in 40 CFR 162.10.

In addition, the following environmental hazard statement must appear on all manufacturing-use product labels:

"Do not discharge into lakes, streams, ponds, or public waters except in accordance with an NPDES permit. For further guidance, contact the nearest Regional Office of the Environmental Protection Agency."

H. Tolerance Reassessment

Using a systemic No-Observed-Effect-level (NOEL) in mice of 16 mg/kg/day and a 100-fold safety factor yields an Acceptable Daily Intake (ADI) of 0.1600 mg/kg/day. The current Theoretical Maximum Residue Concentrate (TMRC) for EPTC is 0.0627 mg/kg/1.5 kg diet/day for a 60 kg human. This occupies 39.19% of the provisional ADI. Therefore, the current tolerances are supported by the data reviewed for the EPTC registration standard.

Based on the data reviewed for this standard, and the recently published revisions in the crop grouping system (48 FR 29855), the tolerances listed for EPTC in 40 CFR 180.117 should be revised.

Based on this reassessment, the recommended EPTC tolerances in or on the following crop groupings are:

Almonds, hulls	0.1(N) ppm
Root and tuber vegetables	0.1(N) ppm
Leaves of root and tuber vegetables	0.1(N) ppm
Legume vegetables, succulent or dried	0.1(N) ppm
Foliage of legume vegetables	0.1(N) ppm
Fruiting vegetables, except cucurbits	0.1(N) ppm
Citrus fruits	0.1(N) ppm
Cereal grains	0.1(N) ppm
Cereal grains, forage, fodder, and straw	0.1(N) ppm
Non-grass animal feeds	0.1(N) ppm
Tree nuts	0.1(N) ppm
Cotton, seeds	0.1(N) ppm
Cotton, forage	0.1(N) ppm
Castor beans	0.1(N) ppm
Flax, seed	0.1(N) ppm
Flax, straw	0.1(N) ppm
Safflower, seed	0.1(N) ppm
Sunflower, seed	0.1(N) ppm
Sunflower, forage	0.1(N) ppm

BROADLEAF WEEDS CONTROLLED (continued)

@PARABAA	fiddleneck	
@PEMAEBB	florida pusley	
@PEWAAAB	groundcherry	
@PEWAIBG	hairy nightshade	
@PCOAFBA	henbit	
@PBDAEAB	lambsquarters	
@PBFAJBN	mugwort	
@PBDAEBI	nettleleaf goosefoot	
@PEWAIAA	nightshade	
@PAAAABI	pigweed	
@PDAAJBF	prickly sida	
@PAFACBC	prostrate pigweed	
@PFMAFBB	puncturevine	(b)
@PAAAABP	purslane	
@PAFACBI	redroot pigweed	
@PBKAHBA	shepherdspurse	
@PCQAMBF	sicklepod	
@PBVAGAA	spurge	
@PBGAFBL	tall morningglory	
@PAFACBA	tumble pigweed	
@PDAABBB	velvetleaf	
@PEWAIBN	villose nightshade	

(a) Use limited to MI.
(b) Use limited to Western United States.

GRASSES AND OTHER MONOCOTS CONTROLLED:

@PCACKBA	annual bluegrass	
@PCAAAAB	annual grasses	
@PCABSAA	barley (volunteer)	
@PCABHBB	barnyardgrass	
@PCAAZBA	bermudagrass	
@PCAAWBF	cenchrus pauciflorus	
@PCABFAA	crabgrass	
@PCACEBD	fall panicum	
@PCACUAA	foxtail	
@PCACUBA	giant foxtail	
@PCABIBA	goosegrass	
@PCACUBF	green foxtail	
@PCABZBA	italian ryegrass	
@PCACWBG	johnsongrass	(c)
@PCACWBG	johnsongrass (seedling)	
@PCABHBA	junglerice	
@PCABKAA	lovegrass	
@PBMADAA	nutsedge	
@PCAAOAA	oat (volunteer)	
@PCAAAAC	perennial grasses	

List continued on the next page.

GRASSES AND OTHER MONOCOTS CONTROLLED (continued)

@PBMADBM	purple nutsedge
@PCAACBA	quackgrass
@PCAATBN	rescuegrass
@PCAAWAA	sandbur
@PCACWBB	shattercane
@PCAARAA	signalgrass
@PCABKBC	stinkgrass
@PCACEBL	texas panicum
@PCADFBA	wheat (volunteer)
@PCAAOBB	wild oat
@PCACEBC	witchgrass
@PCACUBD	yellow foxtail
@PBMADBI	yellow nutsedge

(c) Partial control.

S-ETHYL DIPROPYLTHIOCARBAMATE

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations

AGRICULTURAL CROPS

General Warnings and Limitations: All crop uses are given on a regional basis. The five regions are as follows:

1. Northern Region includes CO, CT, DE, IA, IL, IN, KS, KY, MA, MD, ME, MI, MN, MO, ND, NE, NH, NJ, NY, OH, PA, RI, SD, VA, VT, WI, WV, and southeast WY.
2. Pacific Northwestern Region includes ID, MT, OR, UT, WA, and northwest WY.
3. Southeastern Region includes AL, FL, GA, NC, SC, and eastern TN.
4. Southwestern Region includes AR, LA, MS, NM, OK, western TN, and TX.
5. Western Region includes AZ, CA, and NV.

/2300100	Alfalfa	0.1 ppm (forage) Fourteen day preharvest interval. Do not graze treated area within 14 days of application. General Information: Do not use if a grass or grain nurse crop is to be planted with the legume. For preplant application, temporary crop stunting and sealing of first leaves will occur if conditions for germination and crop growth are not optimum (lack of moisture), and will be relieved by irrigation or adequate rainfall.
	—	OR state labels Registration Number 035503-09509 Registration Number 035503-09510
$2300102 &020.0004	3.00-4.00 (20% G)	Preplant. Broadcast. Soil incorporation. Use the lower dosage on light soils.
&010.0004	3.00 (10% G)	Preplant. Broadcast. Soil incorporation. Nutsedge, annual grass and broadleaf weed control.
&106.0012	2.00-4.00 (6 lb/gal EC)	Use limited to the Northern Region. Preplant. Broadcast. Soil incorporation. Use the lower dosage for control of annual grasses growing from seed.
&107.0012	1.97-3.94 (7 lb/gal EC)	

AND/OR

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Alfalfa (continued)	
$2300103 &106.0012	2.00-3.00 (6 lb/gal EC)	Use limited to the Northern Region. Postemergence. Irrigation water treatment. Apply to established stands. Use the lower dosage on light soils.
&107.0012	1.97-3.06 (7 lb/gal EC)	
$2300102 &106.0012	3.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Preplant. Broadcast. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	
&106.0012	1.50 (6 lb/gal EC)	Use limited to SC. Preplant. Broadcast. Soil incorporation. For fall seeded alfalfa.
&107.0012	1.53 (7 lb/gal EC)	
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Preplant. Broadcast. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	
		AND/OR
$2300103 &106.0012	2.00-3.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Postemergence. Irrigation water treatment. Apply to established stands. Use the lower dosage on light soils.
&107.0012	1.96-3.06 (7 lb/gal EC)	
$2300102 &106.0012	2.00-4.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Preplant. Broadcast. Soil incorporation. Use the lower dosage on light soils.
&107.0012	1.97-3.94 (7 lb/gal EC)	
		OR
$2300103 &106.0012	2.00-3.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Preemergence. Irrigation water treatment. Apply immediately after planting. Use the lower dosage on light soils.
&107.0012	1.97-3.06 (7 lb/gal EC)	
		AND/OR

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Alfalfa (continued)	
&106.0012	2.00-3.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Postemergence. Irrigation water treatment. Apply to established stands. Use the lower dosage on light soils.
&107.0012	1.97-3.06 (7 lb/gal EC)	
$2300102 &106.0012	2.00-4.00 (6 lb/gal EC)	Use limited to the Western Region. Preplant. Broadcast. Soil incorporation. Use the lower dosage on light soils. Do not use on rill-irrigated alfalfa.
&107.0012	1.97-3.94 (7 lb/gal EC)	
		OR
$2300103 &106.0012	2.00-3.00 (6 lb/gal EC)	Use limited to the Western Region. Preemergence. Irrigation water treatment. Apply immediately after planting. Use the lower dosage on light soils.
&107.0012	1.97-3.06 (7 lb/gal EC)	
		AND/OR
&106.0012	2.00-3.00 (6 lb/gal EC)	Use limited to the Western Region. Postemergence. Irrigation water treatment. Apply to established stands. Use the lower dosage on light soils. Limit use to 1 application per cutting and to 6.13 pounds active ingredient per acre per year (up to 12.25 pounds active ingredient per acre per year may be used if applied by flood irrigation).
&107.0012	1.97-3.06 (7 lb/gal EC)	
$2300102 &010.0004	3.00-4.00 (10% G)	Use limited to the Northern, Pacific Northwestern, and Western Regions. Preplant. Broadcast. Soil incorporation. For suppression of quackgrass and for control of nutsedge, annual broadleaf weeds and annual grasses. Use the lower dosage on coarse textured soils and the higher dosage on medium and fine textured soils.
/0300100	**Almond**	0.1 ppm (almonds and hulls) Fourteen day preharvest interval.
$0300103 &106.0012	3.00 (6 lb/gal EC)	Use limited to the Western Region. Irrigation water treatment. Apply after the last cultivation for the season.
&107.0012	3.06 (7 lb/gal EC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/1500100	Beans, Dried-Type (dry beans)	0.1 ppm Do not feed or pasture vines to livestock within 45 days after application. General Information: Do not use on cowpeas (blackeye peas, blackeye beans), soybeans, adzuki beans, lima beans, or other flat podded beans except romano. Under abnormal weather conditions, stunting may occur on gratiot, michilite, sanilac and seaway varieties. Do not exceed 3 pounds active ingredient per acre on small white beans grown on coarse textured soils.
$1500102 &010.0004	4.00-4.50 (10% G)	Use limited to MN and ND. Late fall application. Broadcast. Soil incorporation. Apply and incorporate in the late fall before the ground freezes. Use the lower dosage on coarse textured soils, and the higher dosage on medium and fine textured soils.
&107.0012	3.94-4.59 (7 lb/gal EC)	
&020.0004	3.00-4.00 (20% G)	Preplant. Broadcast or band. Soil incorporation. Use the lower dosage on lighter soils for control of nutsedge, annual grasses and broadleaf weeds. Use the higher dosage on heavier soils for quackgrass and nutsedge control.
&010.0004	3.00 (10% G)	Preplant or preemergence. Broadcast or band. Soil incorporation. Nutsedge, annual grass and broadleaf weed control. Apply and incorporate just before or immediately after planting.
&010.0004	3.00 (10% G)	Layby. Directed spray. Soil incorporation. Nutsedge, annual grass and broadleaf weed control. Apply before bean pods start to form.
&106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Northern Region. Preplant or preemergence. Broadcast or band. Soil incorporation. Apply and incorporate just before or immediately after planting. Use the lower dosage on lighter soils for control of nutsedge, annual grasses and broadleaf weeds. Use the higher dosage on heavier soils for nutsedge, quackgrass and seedling johnsongrass control.
&107.0012	3.06-3.94 (7 lb/gal EC)	

OR

S-ETHYL DIPROPYLTHIOCARBAMATE

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Beans, Dried-Type (dry beans) (continued)	
$1500103 &106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Northern Region. Preplant or preemergence. Irrigation water treatment. Meter into the irrigation water before or immediately after planting.
&107.0012	3.06-3.94 (7 lb/gal EC)	
		OR
$1500102 &106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Northern Region. Layby. Directed spray. Soil incorporation. Apply before bean pods start to form. Use the lower dosage on lighter soils for control of nutsedge, annual grasses and broadleaf weeds. Use the higher dosage on heavier soils for nutsedge, quackgrass and seedling johnsongrass control.
&107.0012	3.06-3.94 (7 lb/gal EC)	
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Preplant (flat planted). Broadcast or band. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	
		OR
&106.0012	2.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Preplant or at planting. Broadcast or band. Subsurface application.
&107.0012	1.97-3.06 (7 lb/gal EC)	
		OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Preplant. Broadcast. Bed treatment. Apply and disc in 6 inches deep prior to forming beds.
&107.0012	3.06 (7 lb/gal EC)	
		OR

S-ETHYL DIPROPYLTHIOCARBAMATE

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Beans, Dried-Type (dry beans) (continued)	
&106.0012	1.50 (6 lb/gal EC)	Use limited to the Southeastern Region. Preplant. Broadcast. Bed treatment. Apply immediately ahead of bedding discs. Do not disc in. Plant 7 days after treatment. If bed shapers are used, bedding up and shaping should be done so that 3 to 4 inches of soil remains over the chemical.
&107.0012	1.53 (7 lb/gal EC)	
		OR
&106.0012	2.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Preplant. Band application. Bed treatment. Apply immediately ahead of bedding discs, or to partially formed beds or bed tops immediately in front of the rebedding equipment. Do not disc in. Plant 7 days after application. If bed shapers are used, bedding up and shaping should be done so that 3 to 4 inches of soil remains over the chemical.
&107.0012	1.75-1.97 (7 lb/gal EC)	
		OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Layby. Directed spray. Soil incorporation. Apply before bean pods start to form.
&107.0012	3.06 (7 lb/gal EC)	
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Preplant (flat planted). Broadcast or band. Soil incorporation.
&&107.0012	3.06 (7 lb/gal EC)	
		OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Preplant or at planting. Broadcast or band. Subsurface application.
&107.0012	3.06 (7 lb/gal EC)	
		OR

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Beans, Dried-Type (dry beans) (continued)	
δ106.0012	3.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Layby. Directed spray. Soil incorporation. Apply before bean pods start to form.
δ107.0012	3.06 (7 lb/gal EC)	
δ106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Preplant. Broadcast or band. Soil incorporation.
δ107.0012	3.06-3.94 (7 lb/gal EC)	
		OR
δ106.0012	3.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Preplant or at planting. Broadcast or band. Subsurface application.
δ107.0012	3.06 (7 lb/gal EC)	
		OR
δ106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Layby. Directed spray. Soil incorporation. Apply before bean pods start to form.
δ107.0012	3.06-3.94 (7 lb/gal EC)	
		OR
δ106.0012	3.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Layby. Broadcast or band. Subsurface application.
δ107.0012	3.06 (7 lb/gal EC)	
δ010.0004	4.00 (10% G)	Use limited to the Northern and Pacific Northwestern Regions. Preplant or preemergence. Broadcast or band. Soil incorporation. For suppression of quackgrass and for control of seedling johnsongrass, nutsedge, annual broadleaf weeds and annual grasses in medium and fine textured soils. Apply and incorporate just before or immediately after planting.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Beans, Dried-Type (dry beans) (continued)	
&010.0004	4.00 (10% G)	Use limited to the Northern and Pacific Northwestern Regions. Layby. Directed application. Soil incorporation. For suppression of quackgrass and for control of seedling johnsongrass, nutsedge, annual broadleaf weeds and annual grasses in medium and fine textured soils. Apply before bean pods start to form.
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Western Region. Preplant. Broadcast or band. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	
		OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Western Region. Preplant or at planting. Broadcast or band. Subsurface application.
&107.0012	3.06 (7 lb/gal EC)	
		OR
&106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Western Region. Layby. Directed spray. Soil incorporation. Apply before bean pods start to form.
&107.0012	3.00-3.94 (7 lb/gal EC)	
		OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Western Region. Layby. Broadcast or band. Subsurface application.
&107.0012	3.06 (7 lb/gal EC)	
/1500300	Beans, Succulent (bush beans)	0.1 ppm
	—	OR state labels Registration Number 035503-09509 Registration Number 035503-09510

S-ETHYL DIPROPYLTHIOCARBAMATE

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/1500300	Beans, Succulent (green beans)	0.1 ppm Do not feed or pasture vines to livestock within 45 days after application. General Information: Do not use on cowpeas (blackeye peas, blackeye beans), soybeans, adzuki beans, lima beans, or other flat podded beans except romano. Under abnormal weather conditions, stunting may occur on gratiot, michilite, sanilac and seaway varieties. Do not exceed 3.06 pounds active ingredient per acre on green beans grown on light textured soils.
	--	OR state label Registration Number 001871-09822
$1500302 &002.3004	3.12 lb product/ 1,000 sq ft. (2.3% G)	Home garden use. Preplant. Broadcast. Soil incorporation. Incorporate to a depth of 2 to 3 inches. Plant at a normal seeding depth.
&020.0004	3.00-4.00 (20% G)	Preplant. Broadcast or band. Soil incorporation. Use the lower dosage on lighter soils for control of nutsedge, annual grasses and broadleaf weeds. Use the higher dosage on heavier soils for quackgrass and nutsedge control.
&010.0004	3.00 (10% G)	Preplant or preemergence. Broadcast or band. Soil incorporation. Nutsedge, annual grass and broadleaf weed control. Apply and incorporate just before or immediately after planting.
&010.0004	3.00 (10% G)	Layby. Directed application. Soil incorporation. Nutsedge, annual grass and broadleaf weed control. Apply before bean pods start to form.
&106.0012 &107.0012	3.00-4.00 (6 lb/gal EC) 3.06-3.94 (7 lb/gal EC)	Use limited to the Northern Region. Preplant or preemergence. Broadcast or band. Soil incorporation. Apply and incorporate just before or immediately after planting. Use the lower dosage on lighter soils for control of nutsedge, annual grasses and broadleaf weeds. Use the higher dosage on heavier soils for nutsedge, quackgrass, and seedling johnsongrass control.

OR

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Beans, Succulent (green beans) (continued)	
$1500303 &106.0012	3.00-4.00 (6 lb/gal/EC)	Use limited to the Northern Region. Preplant or preemergence. Irrigation water treatment. Meter into the irrigation water before or immediately after planting.
&107.0012	3.06-3.94 (7 lb/gal EC)	
		OR
$1500302 &106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Northern Region. Layby. Directed spray. Soil incorporation. Apply before bean pods start to form. Use the lower dosage on light soils for control of nutsedge, annual grasses and broadleaf weeds. Use the higher dosage on heavy soils for nutsedge, quackgrass and seedling johnsongrass control.
&107.0012	3.06-3.94 (7 lb/gal EC)	
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Preplant (flat planted). Broadcast or band. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	
		OR
&106.0012	2.00-3.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Preplant or at planting. Broadcast or band. Subsurface application.
&107.0012	1.97-3.06 (7 lb/gal EC)	
		OR
&107.0012	3.06 (7 lb/gal EC)	Use limited to the Southeastern Region. Preplant. Broadcast. Bed treatment. Apply and disc in 6 inches deep prior to forming beds.
		OR
&106.0012	1.50 (6 lb/gal EC)	Use limited to the Southeastern Region. Preplant. Broadcast. Bed treatment. Apply immediately ahead of bedding discs. Do not disc in. Plant 7 days after treatment. If bed shapers are used, bedding up and shaping should be done so that 3 to 4 inches of soil remains over the chemical.
&107.0012	1.53 (7 lb/gal EC)	
		OR

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Beans, Succulent (green beans) (continued)	
&106.0012	2.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Preplant. Band application. Bed treatment. Apply immediately ahead of bedding discs, or to partially formed beds or bed tops immediately in front of the rebedding equipment. Do not disc in. Plant 7 days after application. If bed shapers are used, bedding up and shaping should be done so that 3 to 4 inches of soil remains over the chemical.
&107.0012	1.75-1.97 (7 lb/gal EC)	
		OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Layby. Directed spray. Soil incorporation. Apply before bean pods start to form.
&107.0012	3.06 (7 lb/gal EC)	
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Preplant (flat planted). Broadcast or band. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	
		OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Preplant or at planting. Broadcast or band. Subsurface application.
&107.0012	3.06 (7 lb/gal EC)	
		OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Layby. Directed spray. Soil incorporation. Apply before bean pods start to form.
&107.0012	3.06 (7 lb/gal EC)	

S-ETHYL DIPROPYLTHIOCARBAMATE

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Beans, Succulent (green beans) (continued)	
&106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Preplant. Broadcast or band. Soil incorporation.
&107.0012	3.06-3.94 (7 lb/gal EC)	
		OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Preplant or at planting. Broadcast or band. Subsurface application.
&107.0012	3.06 (7 lb/gal EC)	
		OR
&106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Layby. Directed spray. Soil incorporation. Apply before bean pods start to form.
&107.0012	3.06-3.94 (7 lb/gal EC)	
		OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Layby. Broadcast or band. Subsurface application.
&107.0012	3.06 (7 lb/gal EC)	
&010.0004	4.00 (10% G)	Use limited to the Northern and Pacific Northwestern Regions. Preplant or preemergence. Broadcast or band. Soil incorporation. For suppression of quackgrass and for control of seedling johnsongrass, nutsedge, annual broadleaf weeds and annual grasses in medium and fine textured soils. Apply and incorporate just before or immediately after planting.
&010.0004	4.00 (10% G)	Use limited to the Northern and Pacific Northwestern Regions. Layby. Directed application. Soil incorporation. For suppression of quackgrass and for control of seedling johnsongrass, nutsedge, annual broadleaf weeds and annual grasses in medium and fine textured soils. Apply before bean pods start to form.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Beans, Succulent (green beans) (continued)	
$106.0012	3.00 (6 lb/gal EC)	Use limited to the Western Region. Preplant. Broadcast or band. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	
		OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Western Region. Preplant. Broadcast or band. Subsurface application.
&107.0012	3.06 (7 lb/gal EC)	
		OR
&106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Western Region. Layby. Directed spray. Soil incorporation. Apply before bean pods start to form.
&107.0012	3.06-3.94 (7 lb/gal EC)	
		OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Western Region. Layby. Broadcast or band. Subsurface application.
&107.0012	3.06 (7 lb/gal EC)	
/1500300	Beans, Succulent (pole beans)	0.1 ppm General Information: Do not use on lima beans and other flat podded beans, except romano.
	—	OR state labels Registration Number 035503-09509 Registration Number 035503-09510
$1500302 &106.0012	3.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Preplant (flat planted). Broadcast or band. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/1500300	Beans, Succulent (snap beans)	0.1 ppm
	—	OR state labels Registration Number 035503-09509 Registration Number 035503-09510
$1500302 &106.0012	3.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Preplant (flat planted). Broadcast or band. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	
/2800200	Beets (table)	0.1 ppm General Information: Under normal use, table beets are susceptible to injury and seeding rate should be increased by 10 percent.
	—	OR state labels Registration Number 035503-09509 Registration Number 035503-09510
$2800202 &107.0012	1.97 (7 lb/gal EC)	Use limited to the Pacific Northwestern Region. Preplant. Broadcast or band. Soil incorporation.
&010.0004 &106.0012	2.00 (10% G) (6 lb/gal EC)	
/2301100	Birdsfoot Trefoil	0.1 ppm (forage) General Information: Do not use if a grass or grain nurse crop is to be planted with the legume. Temporary crop stunting and sealing of first leaves will occur if conditions for germination and crop growth are not optimum (lack of moisture), and will be relieved by irrigation or adequate rainfall.
	—	OR state labels Registration Number 035503-09509 Registration Number 035503-09510
$2301102 &020.0004	3.00-4.00 (20% G)	Preplant. Broadcast. Soil incorporation. Use the lower dosage on light soils.
&010.0004	3.00 (10% G)	Preplant. Broadcast. Soil incorporation. Nutsedge, annual grass and broadleaf weed control.

EPA Index to Pesticide Chemicals

S-ETHYL DIPROPYLTHIOCARBAMATE

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Birdsfoot Trefoil (continued)	
&106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Northern Region. Preplant. Broadcast. Soil incorporation.
&107.0012	3.06-3.94 (7 lb/gal EC)	
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Southeastern and Southwestern Regions. Preplant. Broadcast. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	
&106.0012	2.00-4.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern and Western Regions. Preplant. Broadcast. Soil incorporation. Use the lower dosage on light soils.
&107.0012	1.97-3.94 (7 lb/gal EC)	
&010.0004	3.00-4.00 (10% G)	Use limited to the Northern, Pacific Northwestern and Western Regions. Preplant. Broadcast. Soil incorporation. For suppression of quackgrass and for control of nutsedge, annual broadleaf weeds and annual grasses in medium and fine textured soils. Use the lower dosage on coarse textured soils and the higher dosage on medium and fine textured soils.
/2700100	Castor Bean	0.1 ppm
$2700102 &106.0012	2.00 (6 lb/gal EC)	Use limited to the Northern Region. Preemergence. Broadcast or band. Soil incorporation. Apply immediately after planting.
&107.0012	1.97-2.19 (7 lb/gal EC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/2300300	Clover	0.1 ppm (forage) General Information: Do not use if a grass or grain nurse crop is to be planted with the legume. Temporary crop stunting and sealing of first leaves will occur if conditions for germination and crop growth are not optimum (lack of moisture), and will be relieved by irrigation or adequate rainfall. Do not use on white dutch clover.
	—	OR state labels Registration Number 035503-09509 Registration Number 035503-09510
$2300302 S2301102		Preplant. Refer to Birdsfoot Trefoil for use and limitation information.
/2800600	Corn, Field	0.1 ppm (forage) General Information: Do not use on corn seed stock. Plant seed to a maximum depth of 2 inches. Some labels that are registered for corn only have delineated the regions in the following way: 1. Eastern United States includes AL, CT, DE, FL, GA, KY, MA, MD, ME, NC, NH, NJ, NY, OH, PA, RI, SC, eastern TN, VA, VT, and WV. 2. Central United States includes AR, CO, IA, IL, KS, LA, MN, MO, MT, ND, NE, NM, OK, SD, western TN, TX, WI, and WY. 3. Western United States includes CA, ID, NV, OR, UT, and WA. This chemical is not recommended for use on corn in AZ or the 10 southernmost counties of CA.
	—	OR state labels Registration Number 001871-09819 Registration Number 035503-09509 Registration Number 035503-09510
$2800602 &020.0004	2.00 (20% G)	Preplant. Broadcast or band. Soil incorporation.
&106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Northern Region. Preplant. Broadcast or band. Soil incorportion. For use in fields heavily infested with nutsedge, seedling johnsongrass and shattercane. Use the lower dosage on light textured soils and the higher dosage on heavy soils. Delay planting for 7 to 10 days after treatment.
&107.0012	2.19-3.94 (7 lb/gal EC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Corn, Field (continued)	
6107.0012	1.97-3.06 (7 lb/gal EC)	Use limited to the Northern and Southeastern Regions. Preemergence. Broadcast or band. Soil incorporation. Seedling johnsongrass and shattercane control. Use the higher dosage to control broadleaf weeds. Incorporate into the soil to a maximum depth of 1.5 inches.
6010.0004	2.00-3.00 (10% G)	
6106.0012	(6 lb/gal EC)	
6106.0012	3.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Preplant. Broadcast or band. Subsurface application. For the control of light infestations of annual grasses (except shattercane), annual broadleaf weeds and nutsedge.
6106.0012	3.14 (6.7 lb/gal EC)	
6106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Eastern United States. Preplant. Broadcast or band. Soil incorporation. For the control of annual grasses (except shattercane), annual broadleaf weeds and light nutsedge infestations. Use the lower dosage for light infestations in light soils.
6106.7012	3.14-3.98 (6.7 lb/gal EC)	
6106.0012	4.00-6.00 (6 lb/gal EC)	Use limited to the Eastern United States. Preplant. Broadcast or band. Soil incorporation. Shattercane, bermudagrass and nutsedge control. Use the higher dosage on heavy infestations.
6106.7012	3.98-6.14 (6.7 lb/gal EC)	
6106.0012	6.00 (6 lb/gal EC)	Use limited to the Eastern United States. Preplant. Broadcast or band. Soil incorporation. For the control of moderate infestations of quackgrass and suppression of heavy infestations, and for partial control of rhizome johnsongrass.
6106.7012	6.14 (6.7 lb/gal EC)	
6106.0012	4.00-6.00 (6 lb/gal EC)	Use limited to the Central United States. Preplant. Broadcast or band. Soil incorporation. Annual grasses, annual broadleaf weeds, nutsedge, bermudagrass, quackgrass and shattercane control. Use the lower dosage to control light infestations of quackgrass. Use the higher dosage for heavy infestations of shattercane, nutsedge and bermudagrass, and for partial control of rhizome johnsongrass. On the western slope of CO, where furrow irrigation will be used and corn is flat planted, do not form furrows until corn is in the 3-leaf stage.
6106.7012	3.98-6.14 (6.7 lb/gal EC)	

S-ETHYL DIPROPYLTHIOCARBAMATE

Corn, Field (continued)

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Central United States. Preplant. Broadcast or band. Soil incorporation. Sandbur and wild oat control. On the western slope of CO, where furrow irrigation will be used and corn is flat planted, do not form furrows until corn is in the 3-leaf stage.
&106.7012	3.14 (6.7 lb/gal EC)	
$2800603 &106.0012	4.00-6.00 (6 lb/gal EC)	Use limited to the Central United States. Preplant or preemergence. Irrigation water treatment. Center pivot sprinkler application. Apply and incorporate with 0.5 to 0.75 inch of irrigation water before or immediately after planting.
&106.7012	3.98-6.14 (6.7 lb/gal EC)	
$2800602 &107.0012	1.97 (7 lb/gal EC)	Use limited to the Pacific Northwestern Region. Preplant. Broadcast or band. Soil incorporation.
&010.0004 &106.0012	2.00 (10% G) (6 lb/gal EC)	
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Preplant. Broadcast or band. Soil incorporation. For use in fields heavily infested with nutsedge. Delay planting for 7 to 10 days after treatment.
&107.0012	3.06 (7 lb/gal EC)	
&106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Western United States. Preplant. Broadcast or band. Soil incorporation. Annual grasses, annual broadleaf weeds, bermudagrass and quackgrass control. Use the higher dosage on heavy soils and for quackgrass control on all soils. In CA, do not use on corn planted after May 1.
&106.7012	3.14-3.98 (6.7 lb/gal EC)	
&106.0012	3.00-6.00 (6 lb/gal EC)	Use limited to the Western United States. Preplant. Broadcast or band. Soil incorporation. Nutsedge control. Use the higher dosage on heavy soils. In CA, do not use on corn planted after May 1.
&106.7012	3.14-6.14 (6.7 lb/gal EC)	
&106.0012	6.00 (6 lb/gal EC)	Use limited to the Western United States. Preplant. Broadcast or band. Soil incorporation. For partial control of rhizome johnsongrass. Do not use on corn planted after May 1.
&106.7012	6.14 (6.7 lb/gal EC)	

S-ETHYL DIPROPYLTHIOCARBAMATE

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Corn, Field (continued)	
F 6010.0004	2.00 (10% G)	Preemergence. Broadcast or band. Plant corn to a minimum depth of 2.5 inches. Apply immediately after planting. Do not incorporate or drag prior to emergence of the crop. At least 0.5 inch of rainfall is needed for good weed control. Apply the emulsifiable concentrate in 20 gallons of water or liquid fertilizer per acre. Formulated with 2,4-dichlorophenoxyacetic acid, isooctyl ester.
6246.9012	0.50 gal product/A (46.9% EC)	
/2200500	Corn (silage)	0.1 ppm (forage) General Information: Do not use on corn seed stock. Plant seed to a maximum depth of 2 inches. In the Southeastern Region, do not seed small seeded grains after corn harvest until September. Some labels that are registered for corn only have delineated the regions in the following way: 1. Eastern United States includes AL, CT, DE, FL, GA, KY, MA, MD, ME, NC, NH, NJ, NY, OH, PA, RI, SC, eastern TN, VA, VT, and WV. 2. Central United States includes AR, CO, IA, IL, KS, LA, MN, MO, MT, ND, NE, NM, OK, SD, western TN, TX, WI, and WY. 3. Western United States includes CA, ID, NV, OR, UT, and WA. This chemical is not recommended for use on corn in AZ or the 10 southernmost counties of CA. OR state label Registration Number 001871-09819
$2200502 S2800602		Preplant and preemergence. Refer to Corn, Field for use and limitation information.
$2200503 S2800603		Irrigation water treatment. Refer to Corn, Field for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/1500500	**Corn, Sweet**	0.1 ppm (forage) General Information: Do not use on corn seed stock. Plant seed to a maximum depth of 2 inches. Some labels that are registered for corn only have delineated the regions in the following way: 1. Eastern United States includes AL, CT, DE, FL, GA, KY, MA, MD, ME, NC, NH, NJ, NY, OH, PA, RI, SC, eastern TN, VA, VT, and WV. 2. Central United States includes AR, CO, IA, IL, KS, LA, MN, MO, MT, ND, NE, NM, OK, SD, western TN, TX, WI, and WY. 3. Western United States includes CA, ID, NV, OR, UT, and WA. This chemical is not recommended for use on corn in AZ or the 10 southernmost counties of CA.
	—	OR state labels Registration Number 035503-09509 Registration Number 035503-09510
$1500502 &020.0004	2.00 (20% G)	Preplant. Broadcast or band. Soil incorporation.
&106.0012 &107.0012	3.00-4.00 (6 lb/gal EC) 2.19-3.94 (7 lb/gal EC)	Use limited to the Northern Region. Preplant. Broadcast or band. Soil incorporation. For use in fields heavily infested with nutsedge, seedling johnsongrass and shattercane. Use the lower dosage on light textured soils and the higher dosage on heavy soils. Delay planting for 7 to 10 days after treatment.
&107.0012 &010.0004 &106.0012	1.97-3.06 (7 lb/gal EC) 2.00-3.00 (10% G) (6 lb/gal EC)	Use limited to the Northern and Southeastern Regions. Preemergence. Broadcast or band. Soil incorporation. Seedling johnsongrass and shattercane control. Use the higher dosage to control broadleaf weeds. Incorporate into the soil to a maximum depth of 1.5 inches.
&106.0012 &106.7012	3.00 (6 lb/gal EC) 3.14 (6.7 lb/gal EC)	Use limited to the Southeastern Region. Preplant. Broadcast or band. Subsurface application. For the control of light infestations of annual grasses (except shattercane), annual broadleaf weeds and nutsedge.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Corn, Sweet (continued)	
&106.0012 &106.7012	3.00-4.00 (6 lb/gal EC) 3.14-3.98 (6.7 lb/gal EC)	Use limited to the Eastern United States. Preplant. Broadcast or band. Soil incorporation. For the control of annual grasses (except shattercane), annual broadleaf weeds and light nutsedge infestations. Use the lower dosage for light infestations in light soils.
&106.0012 &106.7012	4.00 (6 lb/gal EC) 3.98 (6.7 lb/gal EC)	Use limited to the Eastern United States. Preplant. Broadcast or band. Soil incorporation. For the control of moderate infestations of quackgrass and suppression of heavy infestations; for partial control of rhizome johnsongrass; and for control of shattercane, bermudagrass and nutsedge.
&106.0012 &106.7012	4.00 (6 lb/gal EC) 3.98 (6.7 lb/gal EC)	Use limited to the Central United States. Preplant. Broadcast or band. Soil incorporation. For the control of annual grasses, annual broadleaf weeds, and light infestations of nutsedge, bermudagrass, shattercane and quackgrass; and for partial control of rhizome johnsongrass. On the western slope of CO, where furrow irrigation will be used and corn is flat planted, do not form furrows until corn is in the 3-leaf stage.
&106.0012 &106.7012	3.00 (6 lb/gal EC) 3.14 (6.7 lb/gal EC)	Use limited to the Central United States. Preplant. Broadcast or band. Soil incorporation. Sandbur and wild oat control. On the western slope of CO, where furrow irrigation will be used and corn is flat planted, do not form furrows until corn is in the 3-leaf stage.
$1500503 &106.0012 &106.7012	4.00 (6 lb/gal EC) 3.98 (6.7 lb/gal EC)	Use limited to the Central United States. Preplant or preemergence. Irrigation water treatment. Center pivot sprinkler application. Apply and incorporate with 0.5 to 0.75 inch of irrigation water before or immediately after planting.
$1500502 &107.0012	1.97 (7 lb/gal EC)	Use limited to the Pacific Northwestern Region. Preplant. Broadcast or band. Soil incorporation.
&010.0004 &106.0012	2.00 (10% G) (6 lb/gal EC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Corn, Sweet (continued)	
	3.00	Use limited to the Pacific Northwestern Region. Preplant. Broadcast or band. Soil incorporation. For use in fields heavily infested with nutsedge. Delay planting for 7 to 10 days after treatment.
&106.0012	(6 lb/gal EC)	
	3.06	
&107.0012	(7 lb/gal EC)	
	3.00-4.00	Use limited to the Western United States. Preplant. Broadcast or band. Soil incorporation. Annual grasses, annual broadleaf weeds, bermudagrass and quackgrass control. Use the higher dosage on heavy soils, for quackgrass control on all soils, and for partial control of rhizome johnsongrass. In CA, do not use on corn planted after May 1.
&106.0012	(6 lb/gal EC)	
	3.14-3.98	
&106.7012	(6.7 lb/gal EC)	
	3.00	Use limited to the Western United States. Preplant. Broadcast or band. Soil incorporation. Nutsedge control. In CA, do not use on corn planted after May 1.
&106.0012	(6 lb/gal EC)	
	3.14	
&106.7012	(6.7 lb/gal EC)	
F	2.00	Preemergence. Broadcast or band. Plant corn to a minimum depth of 2.5 inches. Apply immediately after planting. Do not incorporate or drag prior to emergence of the crop. At least 0.5 inch of rainfall is needed for good weed control. Apply the emulsifiable concentrate in 20 gallons of water or liquid fertilizer per acre. Formulated with 2,4-dichlorophenoxyacetic acid, isooctyl ester.
&010.0004	(10% G)	
	0.50 gal product/A	
&246.9012	(46.9% EC)	
/2800700	Cotton	0.1 ppm (cottonseed and forage) General Information: Use only in non-irrigated areas. Do not apply closer than 4 inches on either side of the cotton drill.
$2800702 &107.0012	1.09 (7 lb/gal EC)	Use limited to the Southeastern Region. Apply at planting. Band application. Subsurface application. May be used on all soil types.
		OR
	1.97	Use limited to the Southeastern Region. Postemergence. Band application. Soil incorporation or subsurface application. Apply after stand is established (when cotton has 2 to 4 leaves). Do not apply after first bolls open.
&107.0012	(7 lb/gal EC)	
	2.00	
&106.0012	(6 lb/gal EC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Cotton (continued)	
&106.0012	2.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Postemergence. Band application. Soil incorporation or subsurface application. Apply after stand is established (when cotton has 2 to 4 leaves). Do not apply after first bolls open.
&107.0012	1.97 (7 lb/gal EC)	
/2800900	Flax	0.1 ppm (flaxseed)
	--	OR state labels Registration Number 035503-09509 Registration Number 035503-09510
$2800902 &010.0004	4.00-4.50 (10% G)	Use limited to MN and ND. Late fall application. Broadcast. Soil incorporation. Apply in the fall before ground freezes. Use the lower dosage on coarse textured soils and the higher dosage on medium and fine textured soils.
&107.0012	3.94-4.59 (7 lb/gal EC)	
&010.0004 &020.0004	3.00 (10% G) (20% G)	Preplant. Broadcast. Soil incorporation.
&106.0012	2.00 (6 lb/gal EC)	Use limited to the Northern and Pacific Northwestern Regions. Preplant. Broadcast. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	
/0200200	Grapefruit	0.1 ppm Fifteen day preharvest interval.
$0200203 &106.0012	3.00 (6 lb/gal EC)	Use limited to the Southeastern, Southwestern and Western Regions. Irrigation water treatment. Apply by flood or furrow irrigation. Meter into the water during the entire irrigation period.
&107.0012	3.06 (7 lb/gal EC)	
/0200200	Grapefruit (nonbearing)	N.F.
$0200216 &010.0004	3.00-6.00 (10% G)	Broadcast or band. Soil incorporation. Apply after lining out.
&106.0012	3.00-6.00 (6 lb/gal EC)	Use limited to the Southeastern, Southwestern and Western Regions. Directed spray to orchard floor. Broadcast or band. Soil incorporation. Apply after lining out.
&107.0012	3.06-6.13 (7 lb/gal EC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/2301600	Ladino Clover	0.1 ppm (forage) Forty-five day preharvest and grazing interval. General Information: Do not use if a grass or grain nurse crop is to be planted with the legume. Temporary crop stunting and sealing of first leaves will occur if conditions for germination and crop growth are not optimum (lack of moisture), and will be relieved by irrigation or adequate rainfall.
$2301603 &106.0012	2.00-3.00 (6 lb/gal EC)	Use limited to the Northern, Southwestern, Pacific Northwestern and Western Regions. Postemergence. Irrigation water treatment. Apply to established stands. Use the lower dosage on light soils.
&107.0012	1.97-3.06 (7 lb/gal EC)	
/0200400	Lemon	0.1 ppm Fifteen day preharvest interval.
$0200403 &106.0012	3.00 (6 lb/gal EC)	Use limited to the Western Region. Irrigation water treatment. Apply by flood or furrow irrigation. Meter into the water during the entire irrigation period.
&107.0012	3.06 (7 lb/gal EC)	
/0200400	Lemon (nonbearing)	N.F.
$0200416 &106.0012	3.00-6.00 (6 lb/gal EC)	Use limited to the Western Region. Directed spray to orchard floor. Broadcast or band. Soil incorporation. Apply after lining out.
&107.0012	3.00-6.13 (7 lb/gal EC)	
/2300600	Lespedeza	0.1 ppm (forage) General Information: Do not use if a grass or grain nurse crop is to be planted with the legume. Temporary crop stunting and sealing of first leaves will occur if conditions for germination and crop growth are not optimum (lack of moisture), and will be relieved by irrigation or adequate rainfall.
	—	OR state labels Registration Number 035503-09509 Registration Number 035503-09510
$2300602 S2301102		Preplant. Refer to Birdsfoot Trefoil for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/0200600	Orange	0.1 ppm Fifteen day preharvest interval.
$0200603 S0200203		Use limited to the Southeastern, Southwestern and Western Regions. Irrigation water treatment. Refer to Grapefruit for use and limitation information.
/0200600	Orange (nonbearing)	N.F.
$0200616 &010.0004	3.00-6.00 (10% G)	Broadcast or band. Soil incorporation. Apply after lining out.
&106.0012	3.00-6.00 (6 lb/gal EC)	Use limited to the Southeastern, Southwestern and Western Regions. Directed spray to orchard floor. Broadcast or band. Soil incorporation. Apply after lining out.
&107.0012	3.00-6.13 (7 lb/gal EC)	
/1500900	Peas (green) (processing)	0.1 ppm
$1500902 &106.0012	2.00 (6 lb/gal EC)	Use limited to western WA. Preplant. Broadcast. Soil incorporation. Early stunting of crop may occur.
&107.0012	1.97-2.19 (7 lb/gal EC)	
/1401300	Potato (Irish)	0.1 ppm Forty-five day preharvest interval. General Information: The variety superior is sensitive. Under stress conditions, early season stunting may occur.
	—	OR state labels Registration Number 035503-09509 Registration Number 035503-09510
$1401302 &010.0004	4.00-4.50 (10% G)	Use limited to MN and ND. Late fall application. Broadcast. Soil incorporation. Apply in late fall before the ground freezes. Use the lower dosage on coarse textured soils and the higher dosage on medium and fine textured soils.
&107.0012	4.59-6.13 (7 lb/gal EC)	
&002.3004	3.12 lb product/ 1,000 sq.ft (2.3% G)	Preplant. Broadcast. Soil incorporation. Incorporate to a depth of 2 to 3 inches.

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Potato (Irish) (continued)

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
&020.0004	3.00-4.00 (20% G)	Preplant. Broadcast or band. Soil incorporation. Use the higher dosage for quackgrass control.
&010.0004	3.00 (10% G)	Drag-off. Soil incorporation. Annual grass and broadleaf weed control.
&106.0012	3.00-6.00 (6 lb/gal EC)	Use limited to the Northern Region. Preplant. Broadcast or band. Soil incorporation. Use the higher dosage for quackgrass and nutsedge control.
&107.0012	3.06-6.13 (7 lb/gal EC)	

OR

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
&106.0012	3.00-6.00 (6 lb/gal EC)	Use limited to the Northern Region. Drag-off. Soil incorporation. Use the higher dosage for nutsedge control.
&107.0012	3.06-6.13 (7 lb/gal EC)	

AND/OR

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
&106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Northern Region. Layby. Directed spray. Soil incorporation.
&107.0012	3.06-3.94 (7 lb/gal EC)	

OR

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
$1401303 &106.0012	3.00 (6 lb/gal EC)	Use limited to the Northern Region. Layby. Irrigation water treatment.
&107.0012	3.06 (7 lb/gal EC)	
$1401302 &106.0012	3.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Preplant. Broadcast or band. Soil incorporation. Use band application when applying and incorporating into beds. Do not use in FL on winter and early spring potatoes.
&107.0012	3.06 (7 lb/gal EC)	

OR

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Potato (Irish) (continued)	
&106.0012 &107.0012	3.00 (6 lb/gal EC) 3.06 (7 lb/gal EC)	Use limited to the Southeastern Region. Preplant and before bed formation. Band application. Soil incorporation. Apply and cover with 3 to 4 inches of soil. Care should be taken not to fold in the band treatment. Do not use in FL on winter and early spring potatoes.
		OR
&106.0012 &107.0012	1.50 (6 lb/gal EC) 1.53 (7 lb/gal EC)	Use limited to the Southeastern Region. Preemergence and before bed formation. Broadcast. Soil incorporation. Apply over the planted crop and bed up immediately with 3 to 4 inches of soil. Do not use in FL on winter and early spring potatoes.
		OR
&106.0012 &107.0012	3.00 (6 lb/gal EC) 3.06 (7 lb/gal EC)	Use limited to the Southeastern Region. Preemergence and after bed formation. Band application. Soil incorporation. Rebed immediately after application with bedding discs set to cover with 3 to 4 inches of soil. Care should be taken not to fold in the band treatment. Do not use in FL on winter and early spring potatoes.
		OR
&106.0012 &107.0012	1.50 (6 lb/gal EC) 1.53 (7 lb/gal EC)	Use limited to the Southeastern Region. Preemergence and after bed formation. Broadcast. Soil incorporation. Rebed immediately after application with bedding discs set to cover with 3 to 4 inches of soil. Do not use in FL on winter and early spring potatoes.
		OR
&106.0012 &107.0012	3.00 (6 lb/gal EC) 3.06 (7 lb/gal EC)	Use limited to the Southeastern Region. Drag-off. Band application. Soil incorporation. Apply after drag-off and cover with 3 to 4 inches of soil using bedding discs. Care should be taken not to fold in the band treatment. Do not use in FL on winter and early spring potatoes.
		OR

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Potato (Irish) (continued)	
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Layby. Directed spray. Soil incorporation. Apply in bands on both sides of row. Cover with 3 to 4 inches of soil. Care should be taken not to fold in the band treatment.
&107.0012	3.06 (7 lb/gal EC)	
		OR
$1401303 &106.0012	3.00 (6 lb/gal EC)	Use limited to the Southeastern Region. Layby. Irrigation water treatment.
&107.0012	3.06 (7 lb/gal EC)	
$1401302 &106.0012	3.00-6.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Preplant. Broadcast or band. Soil incorporation.
&107.0012	3.06-6.13 (7 lb/gal EC)	
		OR
&106.0012	3.00-6.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Drag-off. Soil incorporation. Use the higher dosage for nutsedge control.
&107.0012	3.06-6.13 (7 lb/gal EC)	
		AND/OR
&106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Layby. Directed spray. Soil incorporation.
&107.0012	3.06-3.94 (7 lb/gal EC)	
		OR
$1401303 &106.0012	3.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Layby. Irrigation water treatment.
&107.0012	3.06 (7 lb/gal EC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Potato (Irish) (continued)	
$1401302 &106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Preplant. Broadcast or band. Soil incorporation. Use the higher dosage for quackgrass control.
&107.0012	3.06-3.94 (7 lb/gal EC)	
		AND/OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Layby. Directed spray. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	
		OR
$1401303 &106.0012	3.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern Region. Layby. Irrigation water treatment.
&107.0012	3.06 (7 lb/gal EC)	
$1401302 &106.0012	3.00 (6 lb/gal EC)	Use limited to the Western Region. Preplant. Broadcast or band. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	
		OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Western Region. Drag-off. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	
		OR
&106.0012	3.00-4.00 (6 lb/gal EC)	Use limited to the Western Region. Layby. Directed spray. Soil incorporation. Use the lower dosage on light textured soils.
&107.0012	3.06-3.94 (7 lb/gal EC)	
		OR

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Potato (Irish) (continued)	
$1401303 &106.0012	3.00 (6 lb/gal EC)	Use limited to the Western Region. Layby. Irrigation water treatment.
&107.0012	3.06 (7 lb/gal EC)	
$1401302 &010.0004	3.00-6.00 (10% G)	Use limited to the Northern and Pacific Northwestern Regions. Preplant. Broadcast or band. Soil incorporation. Annual grass and broadleaf weed control.
&010.0004	4.00-6.00 (10% G)	Use limited to the Northern and Pacific Northwestern Regions. Preplant. Broadcast or band. Soil incorporation. For use on fine textured soils for control or suppression of quackgrass, control of nutsedge, annual grasses and broadleaf weeds.
&010.0004	4.00-6.00 (10% G)	Use limited to the Northern and Pacific Northwestern Regions. Drag-off. Soil incorporation. For use on medium and fine textured soils for the control of nutsedge, annual grasses and broadleaf weeds.
&010.0004	3.00-4.00 (10% G)	Use limited to the Northern and Pacific Northwestern Regions. Layby. Broadcast. Soil incorporation. Apply when vines are dry. Use a cloth drag to knock the granules off the plants.
&010.0004	3.00 (10% G)	Use limited to the Southeastern, Southwestern and Western Regions. Preplant. Broadcast or band. Soil incorporation.
&010.0004	3.00 (10% G)	Use limited to the Southeastern, Southwestern and Western Regions. Layby. Broadcast. Soil incorporation. Apply when vines are dry. Use a cloth drag to knock the granules off the plants.
/2807600	Safflower	0.1 ppm (seed)
$2807602 &010.0004	3.00 (10% G)	Preplant. Broadcast. Soil incorporation.
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Northern and Western Regions. Preplant. Broadcast. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/2802000	**Sugar Beets**	0.1 ppm General Information: For subsurface application, do not apply closer than 2.75 inches on either side of the drill row.
$2802002 &107.0012	3.94-4.59 (7 lb/gal EC)	Use limited to MN and ND. Late fall application. Soil incorporation. Apply in late fall before the ground freezes. Use the lower dosage on coarse textured soils and the higher dosage on medium and fine textured soils.
&010.0004 &106.0012	4.00-4.50 (10% G) (6 lb/gal EC)	
&106.0012	2.00-3.00 (6 lb/gal EC)	Use limited to IA, MI, MN, eastern NE, ND, and SD. Preplant. Broadcast or band. Soil incorporation. Use the lower dosage on light soils and the higher dosage on heavy soils. Injury will occur if conditions for growth and germination are not optimum.
&107.0012	1.97-3.06 (7 lb/gal EC)	
&010.0004	3.00 (10% G)	Post-thinning. Band application between the row. Soil incorporation. Incorporate to a depth of 2 to 3 inches.
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Northern Region. Post-thinning. Band application between the row. Soil incorporation. Incorporate to a depth of 2 to 3 inches.
&107.0012	3.06 (7 lb/gal EC)	
		OR
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Northern Region. Post-thinning. Band application between the row. Subsurface application.
&107.0012	3.06 (7 lb/gal EC)	
		OR
$2802003 &106.0012	2.00-3.00 (6 lb/gal EC)	Use limited to the Northern Region. Post-thinning. Irrigation water treatment. Meter into the water after the last cultivation for the season.
&107.0012	1.97-3.06 (7 lb/gal EC)	

S-ETHYL DIPROPYLTHIOCARBAMATE

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Sugar Beets (continued)	
$2802002 &106.0012 &107.0012	3.00 (6 lb/gal EC) 3.06 (7 lb/gal EC)	Use limited to the Southwestern Region. Post-thinning. Band application between the row. Soil incorporation. Incorporate to a depth of 2 to 3 inches.
		OR
$2802003 &106.0012 &107.0012	2.00-3.00 (6 lb/gal EC) 1.97-3.06 (7 lb/gal EC)	Use limited to the Southwestern Region. Post-thinning. Irrigation water treatment. Meter into the water after the last cultivation for the season.
$2800202 &106.0012 &107.0012	3.00 (6 lb/gal EC) 3.06 (7 lb/gal EC)	Use limited to the Pacific Northwestern Region. Post-thinning. Band application between the row. Soil incorporation. Incorporate to a depth of 2 to 3 inches.
		OR
&106.0012 &107.0012	3.00 (6 lb/gal EC) 3.06 (7 lb/gal EC)	Use limited to the Pacific Northwestern Region. Post-thinning. Band application between the row. Subsurface application.
		OR
$2802003 &106.0012 &107.0012	3.06 (6 lb/gal EC) 2.00-3.00 (7 lb/gal EC)	Use limited to the Pacific Northwestern Region. Post-thinning. Irrigation water treatment. Meter into the water after the last cultivation for the season.
$2802002 &106.0012 &107.0012	3.00 (6 lb/gal EC) 3.06 (7 lb/gal EC)	Use limited to the Western Region. Post-thinning. Band application between the row. Soil incorporation. Incorporate to a depth of 2 to 3 inches.
		OR

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Sugar Beets (continued)	
&106.0012	3.00 (6 lb/gal EC)	Use limited to the Western Region. Post-thinning. Band application between the row. Subsurface application.
&107.0012	3.06 (7 lb/gal EC)	
$2802003 &106.0012	2.00-3.00 (6 lb/gal EC)	Use limited to the Western Region. Post-thinning. Irrigation water treatment. Meter into the water after the last cultivation for the season. When beets are to be left in the ground longer than the normal growing season, make 2 applications of 2 pounds active ingredient per acre.
&107.0012	1.97-3.06 (7 lb/gal EC)	
/2802000	**Sugar Beets (seed crop)**	N.F.
	—	OR state labels Registration Number 035503-09509 Registration Number 035503-09510
/2802100	**Sunflower**	0.1 ppm (seed)
$2802102 &010.0004	4.00-4.50 (10% G)	Use limited to MN and ND. Late fall application. Broadcast. Soil incorporation. Apply and incorporate in late fall before the ground freezes. Use the lower dosage on coarse textured soils and the higher dosage on medium to fine textured soils.
&107.0012	3.94-4.59 (7 lb/gal EC)	
&106.0012	3.00 (6 lb/gal EC)	Use limited to MN, ND, and SD. Preplant. Broadcast. Soil incorporation.
&107.0012	3.06 (7 lb/gal EC)	
/1401800	**Sweet Potato**	0.1 ppm General Information: Use the lower dosages on light textured soils and the higher dosages on medium to heavy textured soils.
$1401802 &106.0012	2.00-3.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Preplant. Broadcast or band. Soil incorporation. Incorporate to a maximum depth of 3 inches.
&107.0012	1.97-3.06 (7 lb/gal EC)	

S-ETHYL DIPROPYLTHIOCARBAMATE

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Sweet Potato (continued)	
&106.0012	1.50-2.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Preplant. Band application. Bed over. Treat a band width equal to one-third of the total distance between rows. Soil from areas adjacent to the band that are not treated is then placed on top of the treated band. Band depth in finished and planted bed should be 2 to 4 inches below the bed surface. Bed over immediately after application.
&107.0012	1.53-1.97 (7 lb/gal EC)	
		OR
&106.0012	1.50-2.00 (6 lb/gal EC)	Use limited to the Southwestern Region. Preplant. Broadcast. Bed up. Apply after preshaped beds have been dragged down. Following application, shape soil so that the chemical layer is 2 to 4 inches below bed surface in the finished bed. Bed up immediately after application.
&107.0012	1.53-1.97 (7 lb/gal EC)	
		OR
&106.0012	7.50 (6 lb/gal EC)	Use limited to the Southwestern Region. Postplant. Band application. Apply immediately after planting or within 2 days after planting slips or vine cuttings. Apply to a dry soil surface and do not incorporate; if irrigated, apply prior to irrigation.
&107.0012	7.44-7.65 (7 lb/gal EC)	
&107.0012	7.65 (7 lb/gal EC)	Use limited to the Southeastern Region. Postplant. Band application. Apply immediately after planting or within 2 days after planting slips or vine cuttings. Apply to a dry soil surface and do not incorporate; if irrigated, apply prior to irrigation.
/0200800	Tangerine	0.1 ppm Fifteen day preharvest interval.
$0200803 S0200203		Use limited to the Southeastern, Southwestern and Western Regions. Irrigation water treatment. Refer to Grapefruit for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/1100500	Tomato	0.1 ppm Twenty-one day preharvest interval. General Information: Do not use where grain will be planted within 90 days. Do not irrigate for at least 5 days after application. Do not apply within 2 inches of crop row.
$1100502 &106.0012 &107.0012	3.00 (6 lb/gal EC) (7 lb/gal EC)	Use limited to the following northern CA counties: Butte, Colusa, Contra Costa, Glenn, Merced (north of Highway 152), Sacramento, San Joaquin, Solano, Stanislaus, Sutter, Yoto and Yula. Layby. Directed spray. Band application. Soil incorporation. Use on 3 to 4 inch high tomatoes grown on clay and clay loam soils.
/0300900	Walnut	0.1 ppm
$0300903 &106.0012	3.00 (6 lb/gal EC)	Use limited to the Pacific Northwestern and Western Regions. Irrigation water treatment. Apply during the entire irrigation period.
&107.0012	3.06 (7 lb/gal EC)	
	ORNAMENTALS	
/3101100	African Daisy	N.F.
$3101102 &107.0012	0.11 lb/1,000 sq.ft (7 lb/gal EC)	Soil incorporation. Annual weed control. Apply 2 weeks after transplanting or after growth begins in the spring, when plants are 3 to 5 inches in height. Incorporate immediately to a depth of 2 to 3 inches.
 &002.3004 &005.0004 &106.0012	0.12 lb/1,000 sq.ft (2.3% G) (5% G) (6 lb/gal EC)	
&000.6004	0.12-0.15 lb/1,000 sq.ft (0.6% G)	Soil incorporation. Apply 1 week after transplanting or after growth begins in the spring, when plants are 3 to 5 inches in height. Use the higher dosage to control bermudagrass and nutsedge. Incorporate immediately to a depth of 2 to 3 inches, then water the treated area to prevent any product from adhering to plant foliage. A repeat application may be made in 8 weeks.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3101300	Ageratum	N.F.
$3101302 &002.3004	0.12 lb/1,000 sq.ft (2.3% G)	Soil incorporation. Pretransplant. Annual weed control. Apply any time from 2 weeks to immediately before transplanting. Incorporate immediately to a depth of 2 to 3 inches. For home gardens, water lightly after incorporation.
&107.0012	0.11 lb/1,000 sq.ft (7 lb/gal EC)	Soil incorporation. Annual weed control. Apply 2 weeks after transplanting or after growth begins in the spring, when plants are 3 to 5 inches in height. Incorporate immediately to a depth of 2 to 3 inches.
&002.3004 &005.0004 &106.0012	0.12 lb/1,000 sq.ft (2.3% G) (5% G) (6 lb/gal EC)	
&000.6004	0.12-0.15 lb/1,000 sq.ft (0.6% G)	Soil incorporation. Apply 1 week after transplanting or after growth begins in spring, when plants are 3 to 5 inches in height. Use the higher dosage to control bermudagrass and nutsedge. Incorporate immediately to a depth of 2 to 3 inches, then water the treated area to prevent any product from adhering to plant foliage. A repeat application may be made in 8 weeks.
/3101500	Ajuga	N.F.
$3101502 S3101102		Soil incorporation. Refer to African Daisy for use and limitation information.
/3101700	Alyssum	N.F.
$3101702 &002.3004	0.12 lb/1,000 sq.ft (2.3% G)	Soil incorporation. Pretransplant. Annual weed control. Apply any time from 2 weeks to immediately before transplanting. Incorporate immediately to a depth of 2 to 3 inches. For home gardens, water lightly after incorporation.
&107.0012	0.11 lb/1,000 sq.ft (7 lb/gal EC)	Soil incorporation. Annual weed control. Apply 2 weeks after transplanting or after growth begins in the spring, when plants are 3 to 5 inches in height. Incorporate immediately to a depth of 2 to 3 inches.
&002.3004 &005.0004 &106.0012	0.12 lb/1,000 sq.ft (2.3% G) (5% G) (6 lb/gal EC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3121900	Amaranthus	N.F.
$3121902 S3101302		Soil incorporation. Refer to Ageratum for use and limitation information.
/3514200	American Holly	N.F.
$3514202 &107.0012	0.11 lb/1,000 sq.ft (7 lb/gal EC)	Soil incorporation. Annual weed control. Apply 2 weeks before transplanting balled and canned stock, any time after transplanting, or around established plants after growth begins in the spring. Incorporate immediately to a depth of 2 to 3 inches.
&002.3004 &005.0004 &106.0012	0.12 lb/1,000 sq.ft (2.3% G) (5% G) (6 lb/gal EC)	
&002.3004	0.13-0.14 lb/1,000 sq.ft (2.3% G)	Soil incorporation. Bermudagrass, nutsedge and quackgrass control in established trees and shrubs. Apply after growth begins in the spring. Incorporate immediately to a depth of 6 inches.
&005.0004 &106.0012 &107.0012	0.14 lb/1,000 sq.ft (5% G) (6 lb/gal EC) (7 lb/gal EC)	
&000.6004	0.12-0.15 lb/1,000 sq.ft (0.6% G)	Soil incorporation. Apply 1 week after transplanting or after growth begins in the spring, when plants are 3 to 5 inches in height. Use the higher dosage to control bermudagrass and nutsedge. Incorporate immediately to a depth of 2 to 3 inches, then water the treated area to prevent any product from adhering to plant foliage. A repeat application may be made in 8 weeks.
/3102600	Aster	N.F.
$3102602 S3101302		Soil incorporation. Refer to Ageratum for use and limitation information.
/3502400	Austrian Pine (nursery stock)	N.F.
$3502416 &010.0004	3.00-6.00 (10% G)	Broadcast. Soil incorporation. For use on 2 year old lining-out stock. Apply pretransplant or over well established plants. Use the higher dosage to control quackgrass, heavy infestations of nutsedge and annual broadleaf weeds.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3402200	Azalea	N.F.
$3402202 &106.0012	0.12 lb/1,000 sq.ft (6 lb/gal EC)	Soil incorporation. Annual weed control. Apply 2 weeks before transplanting balled and canned stock, any time after transplanting, or around established plants after growth begins in the spring. Incorporate immediately to a depth of 2 to 3 inches.
&107.0012	0.11 lb/1,000 sq.ft (7 lb/gal EC)	
&106.0012 &107.0012	0.14 lb/1,000 sq.ft (6 lb/gal EC) (7 lb/gal EC)	Soil incorporation. Bermudagrass, nutsedge and quackgrass control in established trees and shrubs. Apply after growth begins in the spring. Incorporate immediately to a depth of 6 inches.
/3402500	Barberry	N.F.
$3402502 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3103400	Begonia	N.F.
$3103402 S3101302		Soil incorporation. Refer to Ageratum for use and limitation information.
/3403100	Boxwood	N.F.
$3403102 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3403600	Camellia	N.F.
$3403602 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3503800	Chamaecyparis	N.F.
$3503802 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3106500	Chrysanthemum	N.F.
$3106502 S3101302		Soil incorporation. Refer to Ageratum for use and limitation information.
/3509500	Citrus (ornamental)	N.F.
$3509502 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3108400	Dahlias	N.F.
$3108402 S3101302		Soil incorporation. Refer to Ageratum for use and limitation information.
/3108600	Daylilies	N.F.
$3108602 S3101302		Soil incorporation. Refer to Ageratum for use and limitation information.
/3108700	Dianthus	N.F.
$3108702 S3101302		Soil incorporation. Refer to Ageratum for use and limitation information.
/3504300	Dogwood	N.F.
$3504302 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3504500	Eastern Hemlock (nursery stock)	N.F.
$3504516 S3502416		Broadcast. Refer to Austrian Pine (nursery stock) for use and limitation information.
/3405300	Euonymus	N.F.
$3405302 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3505100	Fir	N.F.
$3505102 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3110600	Garden Balsam	N.F.
$3110602 S3101702		Soil incorporation. Refer to Alyssum for use and limitation information.
/3300700	Golf Course Sand Traps	N.F.
$3300702	0.12 lb/1,000 sq.ft	Broadcast. Annual grass and broadleaf weed control. Rake into the sand and water lightly. Repeat as needed.
6002.3004	(2.3% G)	
6005.0004	(5% G)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Golf Course Sand Traps (continued)	
&002.3004	0.23 lb/1,000 sq.ft (2.3% G)	Broadcast. Nutsedge control. Rake into the sand to a depth of 2 to 3 inches and water lightly. Repeat as needed.
&005.0004	0.25 lb/1,000 sq.ft (5% G)	
/3506800	Hemlock	N.F.
$3506802 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3112500	Ice Plant	N.F.
$3112502 S3101102		Soil incorporation. Refer to African Daisy for use and limitation information.
/3407600	Ivy	N.F.
$3407602 &002.3004	0.32-0.34 lb/1,000 sq.ft (2.3% G)	Soil incorporation. Pretransplant. Mugwort control. Apply 4 weeks before desired planting date. Incorporate immediately to a depth of 6 inches.
&005.0004	0.35 lb/1,000 sq.ft (5% G)	
&106.0012 &107.0012	0.33 lb/1,000 sq.ft (6 lb/gal EC) (7 lb/gal EC)	
S3101102		Soil incorporation. Refer to African Daisy for additional use and limitation information.
/3408000	Japanese Holly	N.F.
$3408002 &002.3004	0.32-0.34 lb/1,000 sq.ft (2.3% G)	Soil incorporation. Pretransplant. Mugwort control. Apply 4 weeks before desired planting date. Incorporate immediately to a depth of 6 inches.
&005.0004	0.35 lb/1,000 sq.ft (5% G)	

Use pattern continued on the next page.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Japanese Holly (continued)	
	or 0.33 lb/1,000 sq.ft	
&106.0012	(6 lb/gal EC)	
&107.0012	(7 lb/gal EC)	
S3514202		Soil incorporation. Refer to American Holly for additional use and limitation information.
/3507300	Juniper	N.F.
$3507302	0.32-0.34 lb/1,000 sq.ft	Soil incorporation. Pretransplant. Mugwort control. Apply 4 weeks before desired planting date. Incorporate immediately to a depth of 6 inches.
&002.3004	(2.3% G)	
	0.35 lb/1,000 sq.ft	
&005.0004	(5% G)	
	0.33 lb/1,000 sq.ft	
&106.0012	(6 lb/gal EC)	
&107.0012	(7 lb/gal EC)	
S3514202		Soil incorporation. Refer to American Holly for additional use and limitation information.
/3408700	Leucothoe	N.F.
$3408702 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3408800	Ligustrum	N.F.
	--	NY state label Registration Number 038655-10455
/3408900	Lilac	N.F.
$3408902 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3507500	Linden	N.F.
$3507502 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3507600	Loblolly Pine (nursery stock)	N.F.
$3507616 &106.0012	6.00 (6 lb/gal EC)	Use limited to the Southeastern and Southwestern Regions. Broadcast or band. Soil incorporation. Apply and incorporate 14 days prior to seeding.
&107.0012	6.12 (7 lb/gal EC)	
/3508000	Longleaf Pine (nursery stock)	N.F.
$3508016 S3507616		Use limited to the Southeastern and Southwestern Regions. Broadcast or band. Refer to Loblolly Pine (nursery stock) for use and limitation information.
/3508200	Magnolia	N.F.
$3508202 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3508300	Maple	N.F.
$3508302 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3113700	Marigold	N.F.
$3113702 S3101302		Soil incorporation. Refer to Ageratum for use and limitation information.
/3114300	Nasturtium	N.F.
$3114302 S3101302		Soil incorporation. Refer to Ageratum for use and limitation information.
/3509300	Oak	N.F.
$3509302 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3100300	Ornamental Flowering Plants	N.F.
	—	CA state label Registration Number 007421-05829

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3300900	Ornamental Ground Covers	N.F.
	--	CA state label Registration Number 007421-05829
/3500000	Ornamental Trees	N.F.
	--	CA state label Registration Number 007421-05829
/3400400	Ornamental Woody Shrubs	N.F.
	--	CA state label Registration Number 007421-05829
/3410600	Pachysandra	N.F.
$3410602	0.32-0.34 lb/1,000 sq.ft	Soil incorporation. Pretransplant. Mugwort control. Apply 4 weeks before desired planting date. Incorporate immediately to a depth of 6 inches.
&002.3004	(2.3% G)	
	0.35 lb/1,000 sq.ft	
&005.0004	(5% G)	
	0.33 lb/1,000 sq.ft	
&106.0012	(6 lb/gal EC)	
&107.0012	(7 lb/gal EC)	
S3101102		Soil incorporation. Refer to African Daisy for additional use and limitation information.
/3304100	Pachysandra (ground cover)	N.F.
$3304102	0.32-0.34 lb/1,000 sq.ft	Soil incorporation. Pretransplant. Mugwort control. Apply 4 weeks before desired planting date. Incorporate immediately to a depth of 6 inches.
&002.3004	(2.3% G)	
	0.35 lb/1,000 sq.ft	
&005.0004	(5% G)	
	0.33 lb/1,000 sq.ft	
&106.0012	(6 lb/gal EC)	
&107.0012	(7 lb/gal EC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Pachysandra (ground cover) (continued)	
S3101102		Soil incorporation. Refer to African Daisy for additional use and limitation information.
/3410900	**Periwinkle**	N.F.
$3410902 S3101102		Soil incorporation. Refer to African Daisy for use and limitation information.
/3304400	**Periwinkle (ground cover)**	N.F.
$3304402 S3101102		Soil incorporation. Refer to African Daisy for use and limitation information.
/3114900	**Pansies**	N.F.
$3114902 S3101302		Soil incorporation. Refer to Ageratum for use and limitation information.
/3115400	**Petunias**	N.F.
$3115402 &002.3004	0.32-0.34 lb/1,000 sq.ft (2.3% G)	Soil incorporation. Pretransplant. Mugwort control. Apply 4 weeks before desired planting date. Incorporate immediately to a depth of 6 inches.
&005.0004	0.35 lb/1,000 sq.ft (5% G)	
&106.0012 &107.0012	0.33 lb/1,000 sq.ft (6 lb/gal EC) (7 lb/gal EC)	
S3101302		Soil incorporation. Refer to Ageratum for additional use and limitation information.
/3411100	**Pieris**	N.F.
$3411102 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3509800	**Pine**	N.F.
$3509802 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.

S-ETHYL DIPROPYLTHIOCARBAMATE

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3509900	Podocarpus	N.F.
$3509902 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3510600	Red Pine (nursery stock)	N.F.
$3510616 S3502416		Broadcast. Refer to Austrian Pine (nursery stock) for use and limitation information.
/3411800	Rhododendron	N.F.
$3411802 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3412000	Rose	N.F.
$3412002 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3511300	Scotch Pine (nursery stock)	N.F.
$3511316 S3502416		Broadcast. Refer to Austrian Pine (nursery stock) for use and limitation information.
/3511400	Shortleaf Pine (nursery stock)	N.F.
$3511416 S3507616		Use limited to the Southeastern and Southwestern Regions. Broadcast or band. Refer to Loblolly Pine (nursery stock) for use and limitation information.
/3521400	Slash Pine (nursery stock)	N.F.
$3521416 S3507616		Use limited to the Southeastern and Southwestern Regions. Broadcast or band. Refer to Loblolly Pine (nursery stock) for use and limitation information.
/3511600	Spruce	N.F.
$3511602 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3412100	St. John's-Wort	N.F.
$3412102 S3101102		Soil incorporation. Refer to African Daisy for use and limitation information.
/3119000	Stonecrop	N.F.
$3119002 S3101102		Soil incorporation. Refer to African Daisy for use and limitation information.
/3310600	Strawberry (ornamental)	N.F.
$3310602 S3101102		Soil incorporation. Refer to African Daisy for use and limitation information.
/3413700	Viburnum	N.F.
$3413702 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3512600	White Pine (nursery stock)	N.F.
$3512616 S3502416		Broadcast. Refer to Austrian Pine (nursery stock) for use and limitation information.
/3513000	Yew	N.F.
$3513002 S3514202		Soil incorporation. Refer to American Holly for use and limitation information.
/3121300	Zinnia	N.F.
$3121302 S3101302		Soil incorporation. Refer to Ageratum for use and limitation information.

S-ETHYL DIPROPYLTHIOCARBAMATE

Listing of Registered Pesticide Products by Formulation

6098.5001 98.5% technical chemical
S-ethyl dipropylthiocarbamate (041401)
000476-02140

6087.8002 87.8% formulation intermediate
S-ethyl dipropylthiocarbamate (041401)
000476-02165

6000.6004 0.6% granular
S-ethyl dipropylthiocarbamate (041401)
000239-02300

6001.0004 1% granular
S-ethyl dipropylthiocarbamate (041401)
035503-09510

6001.5004 1.5% granular
S-ethyl dipropylthiocarbamate (041401)
035503-09509

6002.0004 2% granular
S-ethyl dipropylthiocarbamate (041401)
001871-09819 001871-09822

6002.3004 2.3% granular
S-ethyl dipropylthiocarbamate (041401)
000004-00156 000476-01910 000779-00084 000829-00225
000869-00094 000904-00220 007421-00008 042057-00068

6005.0004 5% granular
S-ethyl dipropylthiocarbamate (041401)
000476-01307 007421-05829

6010.0004 10% granular
S-ethyl dipropylthiocarbamate (041401)
000476-01620

S-ethyl dipropylthiocarbamate (041401) plus 2,4-dichlorophenoxyacetic
# acid, isooctyl ester (030063)
000476-01988

6020.0004 20% granular
S-ethyl dipropylthiocarbamate (041401)
000476-02101

6106.0012 6 lb/gal emulsifiable concentrate
S-ethyl dipropylthiocarbamate (041401)
000476-01198 000476-02032 000476-02131

Listing of Registered Pesticide Products by Formulation (continued)

6106.7012 6.7 lb/gal emulsifiable concentrate
# S-ethyl dipropylthiocarbamate (041401)
000476-02157

6107.0012 7 lb/gal emulsifiable concentrate
# S-ethyl dipropylthiocarbamate (041401)
000476-02154 002749-00249

6246.9012 46.9% emulsifiable concentrate
S-ethyl dipropylthiocarbamate (041401) plus 2,4-dichlorophenoxyacetic
# acid, isooctyl ester (030063)
000476-01794

6000.0090 formulation not identified
# S-ethyl dipropylthiocarbamate (041401)
038655-10445

II. REQUIREMENT FOR SUBMISSION OF GENERIC DATA

A. This portion of the guidance document is a Notice issued under the authority of FIFRA Section 3(c)(2)(B) and describes, in table format, the data required for maintaining the registrability of each product. Additionally, a bibliography (Appendix II-1) is included that identifies that data considered as part of the data base supporting this standard. EPA has determined that additional generic data described in this Notice must be submitted to EPA for evaluation in order to maintain in effect the registration(s) of your product(s) identified as an attachment to the cover letter accompanying this guidance document. As required by FIFRA Section 3(c)(2)(B), you are required to take appropriate steps to comply with this Notice.

EPA may suspend the registration of each of those products unless, within the specified time, you have informed EPA how you will satisfy the requirements of this Notice. Any such suspension will remain in effect until you have complied with the terms of this Notice.

B. What Generic Data 1/ Must Be Submitted. You may ascertain which generic data you must submit by consulting Table A at the end of this chapter. That table shows all the generic data needed to evaluate the continued registrability of all products, and the dates by which the data must be submitted. The required data must be submitted 2/. Any necessary studies must be conducted in accordance with EPA-approved protocols, the Pesticide Registration Guidelines, or data collected under the approved protocols of the Organization for Economic Cooperation and Development (OECD). If you wish not to develop data which are necessary to support the registration or reregistration of certain uses appearing in your labeling, you may delete those uses at the time you submit your revised labeling.

Also for certain kinds of testing (generally ecological effects), EPA requires the test substance to be a "typical formulation," and in those cases EPA needs data of that

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1/ Generic data pertain to the properties or effects of a particular ingredient, and thus are relevant to an evaluation of the risks of all products containing that ingredient (or all such products having a certain use pattern), regardless of any such product's unique composition or use. Product-specific data relate only to the properties or effects of a product with a particular composition (or a group of products with closely similar composition).

2/ USEPA, 1982. Pesticide Registration; Proposed Data Requirements Part 158. FEDERAL REGISTER of November 24, 1982 (47 FR 53192) type for each major formulation category (e.g., emulsifiable concentrates, wettable powders, granulars, etc.) These are classified as generic data and when needed are specified in Table A. EPA may possess data on certain "typical formulations" but not others. Note: The "typical formulation" data should not be confused with product-specific data (Table B) which are required on each formulation. Product-specific data are further explained in Chapter IV of this document.

C. Options Available for Complying With Requirements to Submit Data

Within 90 days of your receipt of this Notice you must submit to EPA a completed copy of the form entitled "FIFRA Section 3(c)(2)(B) Summary Sheet" [EPA Form 8580-1, Appendix II-2] for each of your products. On that form you must state which of the following methods you will use to comply with the requirements of this Notice:

1. (a) Notify EPA that you will submit the data, and

   (b) either submit the existing data you believe will satisfy the requirement, or state that you will generate the data by conducting testing. If the test procedures you will use deviate from (or are not specified in) the Registration Guidelines or protocols contained in the Reports of Expert Groups to the Chemicals Group, Organization for Economic Cooperation and Development (OECD) Chemicals Testing Programme, you must enclose the protocols you will use.

2. Notify EPA that you have entered into an agreement with one or more other registrants to jointly develop (or share in the cost of developing) the data. If you elect this option, you must notify EPA which registrant(s) are parties to the agreement.

3. File with EPA a completed "Certification of Attempt to Enter Into an Agreement With Other Registrants for Development of Data" (EPA Form 8580-6, Appendix II-3)*/

4. Request that EPA amend your registration by deleting the uses for which the data are needed. (This option is not available to applicants for new products.)

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*/ FIFRA Section 3(c)(2)(B) authorizes joint development of data by two or more registrants, and provides a mechanism by which parties can obtain an arbitrator's decision if they agree to jointly develop data but fail to agree on all the terms of the agreement. The statute does not compel any registrant to agree to develop data jointly.

(Footnote continued at bottom of next page)

5. Request voluntary cancellation of the registration(s) of your products for which the data are needed. (This option is not available to applicants for new products.)

D. Procedures for Requesting Changes in Testing Methodology and Extensions of Time

EPA recognizes that you may disagree with our conclusions regarding the appropriate ways to develop the required data or how quickly the data must be submitted. If the test procedures you plan to use deviate from (or are not specified in) the registration guidelines or protocols contained in the reports of the Expert Groups to the Chemical Groups, Organization for Economic Cooperation and Development (OECD) Chemicals Testing Programme, you must submit the protocol for Agency review prior to the initiation of the test.

If you think that you will need more time to generate the required data than is allowed by EPA's schedule, you may submit a request for an extension of time. The extension request must be submitted in writing to the Product Manager. The extension request should state the reasons why you conclude that an extension is appropriate. While EPA considers your request, you must strive to meet the deadline for submitting the required data.

(Footnote continued from bottom of previous page)

In EPA's opinion, joint data development by all registrants who are subject to the requirements to submit a pertinent item of data or a cost-sharing agreement among all such registrants is clearly in the public interest. Duplication of testing could increase costs, tie up testing facilities, and subject an unnecessarily large number of animals to testing.

As noted earlier, EPA has discretion not to suspend the registration of a product when a registrant fails to submit data required under FIFRA Section 3(c)(2)(B). EPA has concluded that it is appropriate to exercise its discretion not to suspend in ways which will discourage duplicative testing. Accordingly, if (1) a registrant has informed us of his intent to develop and submit data required by this Notice; and (2) a second registrant informs EPA that it has made a bona fide offer to the first registrant to share in the expenses of the testing [on terms to be agreed upon or determined by arbitration under FIFRA Section 3(c)(2)(B)(iii)]; and (3) the first registrant has declined to agree to enter into a cost-sharing agreement, EPA will not suspend the second firm's registration. While the first firm is not required to agree to jointly develop data, EPA is not required to force the second firm to engage in economically inefficient duplicative testing in order to maintain its registration.

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition[1]/	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]/
§158.120 Product Chemistry				
Product Identity:				
61-1 - Identity of Ingredients	TGAI	Yes	GS0064-001 GS0064-004 GS0064-002 GS0064-006 GS0064-003 GS0064-007	No
61-2 - Description of Beginning Material and Manufacturing Process	TGAI	Partially[4]/	GS0064-005 GS0064-006	Yes
61-3 - Discussion of Formation of Ingredients & Impurities	TGAI	Partially[5]/	GS0064-006	Yes
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis	TGAI	Partially[6]/	GS0064-006 GS0064-007	Yes
62-2 - Certification of Limits	TGAI[7]/	Partially	GS0064-006 GS0064-007	Yes
62-3 - Analytical Methods for Enforcement of Limits	TGAI	Yes	GS0064-013	No
Physical and Chemical Characteristics				
63-2 - Color	TGAI	Yes	GS0064-001 GS0064-008 GS0064-002	No
63-3 - Physical State	TGAI	Yes	GS0064-001 GS0064-008	No
63-4 - Odor	TGAI	Yes	GS0064-001 GS0064-008 GS0064-002	No
63-5 - Melting Point	TGAI	n/a[2]/	-	

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]
Physical and Chemical Characteristics				
63-6 - Boiling Point	TGAI	Yes	GS0064-001 GS0064-008 GS0064-002	No
63-7 - Density, Bulk Density, or Specific Gravity	TGAI	Yes	GS0064-001 GS0064-008 GS0064-002	No
63-8 - Solubility	TGAI OR PAI	Yes	GS0064-001 GS0064-008 GS0064-002	No
63-9 - Vapor Pressure	PAI	Yes	GS0064-001 GS0064-008 GS0064-002	No
63-10 - Dissociation constant	PAI	n/a	-	
63-11 - Octanol/water partition	PAI	No	-	Yes
63-12 - pH	TGAI	Yes	GS0064-001 GS0064-002	No
63-13 - Stability	TGAI	Yes	GS0064-001 GS0064-002	No
Other Requirements:				
64-1 - Submittal of samples	Choice			

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

§158.120 Product Chemistry

1/ Composition: TGAI = Technical grade of the active ingredient; PAI = Pure active ingredient; EPA's Choice = Choice of several test substances determined on a case-by-case basis.

2/ N/a = Not applicable: Data requirement is not necessary for purposes of this standard.

3/ Data must be submitted no later than six months from receipt of this standard.

4/ As specified by §61-2 for beginning materials. PPG Industries has submitted the required data and information for Chemolimpex® (98.5%, T.C.). Similar data and information are required from the Stauffer Chemical Company for technical Eptam® (98.5%, T.C.) and its MUP (87.8%, M.C.).

As specified by §61-2 for manufacturing process, PPG's description of its process is satisfactory. Although Stauffer's manufacturing process is described by U.S. Patent 2,913,327 (GS0089005), a review of the supporting data indicates technical Eptam® may not be manufatured by the patented process. Stauffer should clarify this point by submitting the data and information required by §61-2 and -3.

5/ As specified by §61-3, PPG Industries has submitted a discussion concerning the impurities in Chemolimpex® (98.5%, T.C.); similar data and discussion are needed from the Stauffer Chemical Company for both technical Eptam® (98.5%, T.C.) and their MUP Product (87.8%, M.C.).

6/ As specified by §61-1, neither company has addressed the preliminary analysis requirement. Although Stauffer has indicated composition ranges for ingredients and impurities present in technical Eptam® (98.5%, T.C.), information on the analytical procedures and the analytical results supporting these ranges are not present in the available data for either the technical (98.5%, T.C.) or the MUP (87.8%, M.C.); nor are such analyses available for Chemolimpex® (98.5%, T.C.).

7/ As specified by §61-2, certified composition limits are required for TGAI's when they are to be directly marketed. Both Stauffer and PPG Industries market their TGAI's (EPA Registration No. 476-2140 and 748-223); therefore certified composition limits are needed for the ingredients and impurities of these two products. Limits are also required for Stauffer's MUP (87.8%, M.C.).

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition[1/]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3/]
§158.125 Residue Chemistry				
171-4 - Nature of Residue (Metabolism)				
- Plants	PAIRA	Yes	00022318 00022389 GS0064-011	No
- Livestock	PAIRA and plant metabolites	[4/]	-	
171-4 - Residue Analytical Method				
- Plant residues	TGAI and Metabolites	Yes	00020556 00021557 00021824 00021825 00021826 GS0064-009	No
- Animal residues	TGAI and Metabolites	[4/]		
171-4 - Storage Stability Data	PAI	n/a[2/]	-	
171-4 - Magnitude of the Residue-Residue Studies for Each Food Use				
- Castor bean	TEP	Yes	GS0064-010	No
- Flaxseed	TEP	Yes	GS0064-010	No
- Cotton	TEP	Yes	GS0064-010	No
- Safflower	TEP	Yes	GS0064-010	No

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]
§158-125 Residue Chemistry				
171-4 - Magnitude of the Residue-Residue Studies for Each Food Use				
- Sunflower Seeds	TEP	Yes	GS0064-010	No
- Asparagus	TEP	Yes	GS0064-010	No
- Citrus Fruits				
Oranges	TEP	Yes	GS0064-010	No
Tangerines	TEP	Yes	GS0064-010	No
- Cereal grains				
Field and Sweet Corn	TEP	Yes	GS0064-010	No
- Grasses (Forage)				
Corn (Sweet and Field) Sweet corn cannery wastes	TEP	Yes	GS0064-010	No
- Legumes (Forage)				
Alfalfa	TEP	Yes	GS0064-010	No
Clover	TEP	Yes	GS0064-010	No
Bean Vines and Hay	TEP	Yes	GS0064-010	No
Pea Vine	TEP	Yes	GS0064-010	No

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition[1/]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3/]
Residue Studies (continued)				
- Nuts				
Almonds, Shells	TEP	Yes	GS0064-010	No
Walnuts	TEP	Yes	GS0064-010	No
- Vegetables (Fruiting)				
Tomatoes	TEP	Yes	GS0064-010	No
Peppers	TEP	Yes	GS0064-010	No
- Leaves of Root & Tuber Vegetables				
Sugar Beets Tops	TEP	Yes	GS0064-010	No
Table Beets Tops	TEP	Yes	GS0064-010	No
- Vegetables (Root Crop)				
Potatoes	TEP	Yes	GS0064-010	No
Sugar Beet Roots	TEP	Yes	GS0064-010	No
Sweet Potatoes	TEP	Yes	GS0064-010	No
Table Beets	TEP	Yes	GS0064-010	No
- Vegetables (Legumes)				
Dried Beans	TEP	Yes	GS0064-010	No
Peas, Succulent	TEP	Yes	GS0064-010	No

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]
Residue Studies (continued)				
Snap Beans, Succulent	TEP	Yes	GS0064-010	No
171-4 - Magnitude of the Residue Residue Studies				
Processed Crops				
Citrus pulp	TEP	5/	-	
Pineapple bran	TEP	5/	-	
Meat and Milk	TGAI	6/	-	
Poultry and Eggs	TGAI	6/	-	

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

§158.125 Residue Chemistry

1/ Composition: TGAI = Technical grade of the active ingredient; PAIRA = Pure active ingredient, radiolabelled; PAI = Pure active ingredient; TEP = Typical end-use product.

2/ N/a = Not applicable: Data requirement is not necessary for purposes of this standard.

3/ Data must be submitted no later than __________ N/A __________.

4/ In view of the negligible residues of EPTC found in raw agricultural commodities following the recommended uses, residues of EPTC will not transfer to animals from the feed use of these commodities. Therefore, studies to delineate the animal metabolism of EPTC are not required for this standard.

5/ The uses of EPTC effect negligible residues of EPTC *per se* in/on animal feeds, therefore, tolerances for residues in/on these feeds are not necessary.

6/ Since there is no reason to expect residues in items of feed, tolerance are not required for residues of EPTC *per se* in meat, milk, poultry or eggs.

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition[1/]	Use [2/] Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3/]
158.130 Environmental Fate					
DEGRADATION STUDIES-LAB:					
161-1 - Hydrolysis	TGAI or PAIRA	A,E	No	-	Yes
Photodegradation					
161-2 - In Water	TGAI or PAIRA	A	No	-	Yes
161-3 - On Soil	TGAI or PAIRA	A	No	-	No[4/]
161-4 - In Air	TGAI or PAIRA	A	No[5/]	-	No
METABOLISM STUDIES-LAB:					
162-1 - Aerobic Soil	TGAI or PAIRA	A,E	Partially[6/]	GS0064-012	Yes
162-2 - Anaerobic Soil	TGAI or PAIRA	A	No	-	Yes
162-3 - Anaerobic Aquatic	TGAI or PAIRA		No	-	No[7/]
162-4 - Aerobic Aquatic	TGAI or PAIRA		No	-	No[8/]
MOBILITY STUDIES:					
163-1 - Leaching and Adsorption/Desorption	TGAI or PAIRA	A,E	Partially	00020567 00043683	Yes

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition 1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)? 3/
MOBILITY STUDIES:					
163-2 - Volatility (Lab)	TEP	A	No	-	Yes
163-3 - Volatility (Field)	TEP	A	No	-	Yes 10/
DISSIPATION STUDIES - FIELD:					
164-1 - Soil	TEP	A	No	-	Yes
164-2 - Aquatic (Sediment)	TEP		No	-	No 11/19/20/
164-3 - Forestry	TEP		No	-	No 12/
164-4 - Combination and Tank Mixes			13/	-	
164-5 - Soil, Long-term	TEP	A	No	-	No 14/

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition[1/]	Use [2/] Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3/]
ACCUMULATION STUDIES:					
165-1 - Rotational Crops (Combined)	PAIRA	A	No	-	Yes
165-2 - Rotational Crops (Field)	TEP	A	No	-	Yes[15/]
165-3 - Irrigated Crops	TEP		No	-	No[16/]
165-4 - Fish	TGA and PAIRA	A	No	-	Yes
165-5 - In Aquatic Non-Target Organisms	TEP		No	-	No[17/]
REENTRY	TEP	A,B	No		No[18/]

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

§158.130 Environmental Fate Footnotes

1/ Composition: TGAI = Technical grade of the active ingredient; PAIRA = Pure active ingredient, radiolabelled; TEP = Typical end-use product.

2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food Crop; C=Aquatic, Non-Food; D=Greenhouse, Non-Food; E=Domestic Outdoor.

3/ Data must be submitted no later than 48 months from receipt of this standard.

4/ Photodegradation on soil data are required, but waived because EPTC is incorporated into the soil.

5/ Photodegradation in air data are required, but waived since EPTC is soil incorporated. Therefore, significant EPTC exposure to workers is not expected.

6/ The study (GS0064-012) partially satisfies the data requirements for aerobic soil metabolism by providing information on the half-life of EPTC and formation of CO_2 as a degradate in silt loam and sandy loam soils. A material balance and identification of EPTC degradates, in aerobic soil other than CO_2 are required.

7/ No data were submitted; however, no data are required because there are no registered uses for EPTC that require anaerobic aquatic metabolism data.

8/ No data were submitted; however, no data are required because there are no registered uses for EPTC that require aerodic aquatic metabolism data.

9/ Column leaching study (00020567) partially satisfies the data requirement by providing rapid leaching data for [^{14}C] EPTC in loamy sand and loam soils. Data in study (00043683) utilizing soil TLC analysis partially fulills data requirements by demonstrating that [^{14}C] EPTC is moderately mobile in a loamy sand soil. Additional data are required on the mobility of EPTC (unaged) in two soils other than loamy sand and loam, preferably a silt loam, clay or clay loam, and EPTC aged in a sandy loam for the determination of the mobility of degradates. This will satisfy the mobility data requirements for the terrestrial, field and vegetable crop, and orchard crop uses. To satisfy the data requirements for the domestic outdoor use, a batch equilibrium (adsorption/desorption) determination for four soils such as sandy loam, silt loam, clay or clay loam is also required.

10/ The requirements for the submission of field volatility studies will be based upon the results of the laboratory volatility tests.

11/ No data were submitted; however, no data are required because there are no registered uses for EPTC that require aquatic field dissipation data.

12/ No data were submitted; however, no data are required because EPTC has no registered forestry uses.

13/ This standard covers EPTC as the single active ingredient. Currently there is no requirement for the submission of combination and tank mixes data.

14/ No data were submitted; however, data requirements are waived based on the results of terrestrial, field dissipation study (GS0064-001) which indicated that EPTC residue in soil will dissipate more than 50% prior to a subsequent application of EPTC.

15/ No data were submitted; however, all data may be required based on the results of the confined rotational crops studies.

16/ No data were submitted; however, no data are required because there are no registered uses for EPTC that require accumulation studies on irrigated crops.

17/ No data were submitted; however, no data are required because there are no registered uses for EPTC that require accumulation studies in aquatic non-target organisms.

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Environmental Chemistry (continued)

18/ Data to support the establishment of reentry protection standard are not required because the Agency has determined, based on the use patterns and available toxicity data for EPTC, that the criteria for §158.40 have not been met.

19/ The metering of EPTC into irrigation water serves as a vehicle for treating (applying) the product to the target area.

20/ Potential groundwater contamination hazard study (00079801) identified a cultural irrigation practice which involves collecting irrigation water in tailwater pits (basins excavated to impound runoff from fields during irrigation.) These also collect water during and after heavy rainfall. EPTC residues have been found in both pit water and pit bottom soil. Since the bottom of these pits are sometimes located three meters below the soil surface, and since EPTC has been found to leach in most soils, there exists a potential for contamination of ground water associated with irrigation systems utilizing tailwater pits.

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition[1]	Use [2] Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]
§158.135 Toxicology					
ACUTE TESTING					
81-1 - Oral LD_{50} - Rat	TGAI	A,B,C,D,E	Yes	00024547 00024548 00024549 00024550 00084437	No
81-2 - Dermal LD_{50}	TGAI	A,B,C,D,E	Yes	00024549	No
81-3 - Inhalation LC_{50}- Rat	TGAI	A,B,C,D,E	Yes	00072794	No
81-4 - Primary Eye Irritation	TGAI	A,B,C,D,E	Yes	00024547 00024550 00084437	No
81-5 - Primary Dermal Irritation	TGAI	A,B,C,D,E	Yes	00024550 00084437	No
81-6 - Dermal Sensitization	TGAI	A,B,C,D,E	Yes	00024549	No
81-7 - Acute Delayed Neurotoxicity	TGAI	A,B,C,D,E	No	-	Yes[4]
SUBCHRONIC TESTING:					
82-1 - 90-Day Feeding - Rodent, Non-rodent	TGAI	A,B,C,D,E	Yes	00022101 00024553 00022358	No
82-2 - 21-Day Dermal	TGAI	A,B,C,D,E	Yes	00024552	No
82-3 - 90-Day Dermal	TGAI	A,B,C,D,E	n/a[5]		
82-4 - 90-Day Inhalation Rat	TGAI	A,B,C,D,E	n/a		
82-5 - 90-Day Neurotoxicity- Hen/Mammal	TGAI	A,B,C,D,E	No		[6]

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition[1]	Use[2] Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]
§158.135 Toxicology (continued)					
CHRONIC TESTING:					
83-1 - Chronic Toxicity - 2 species: Rodent and Non-rodent	TGAI	A & B	Partially	00022101	Yes[7]
83-2 - Oncogenicity Study- 2 species: Rat and Mouse preferred	TGAI	A & B	Partially	00022100	Yes[8][11]
83-3 - Teratogenicity - 2 species	TGAI	A & B	No[13]	-	Yes[9][11]
83-4 - Reproduction, 2-generation	TGAI	A & B	No[14]	-	Yes[10][11]
MUTAGENICITY TESTING					
84-2 - Gene Mutation	TGAI	A & B	Partially	00025376 05011869	Yes[12]
84-2 - Chromosomal Aberration	TGAI	A & B	Partially	05022231	Yes
84-2 - Other Mechanisms Mutagenicity	TGAI	A & B	No	-	Yes

TABLE A

GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition[1/]	Use [2/] Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation		Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3/]
§158.135 Toxicology (continued)						
SPECIAL TESTING						
85-1 - General Metabolism	PAI or PAIRA	A & B	Yes	00021831 00043646	00021832	No
85-2 - Domestic Animal Safety	Choice	A & B	N/a			

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

§158.120 Toxicology (continued)

1/ Composition: TGAI = Technical grade of the active ingredient; PAIRA = Pure active ingredient, radiolabelled; TEP = Typical end-use product; CHOICE = Test substances determined on a case-by-case basis.

2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food Crop; C=Aquatic, Non-Food; D=Greenhouse, Non-Food; E=Domestic Outdoor.

3/ Data must be submitted no later than 48 months from receipt of this standard, except for data in response to the previously issued Data Call-In notice.

4/ An acute delayed neurotoxicity test must be submitted no later than six months from receipt of this standard because EPTC is a carbamate.

5/ N/a = Not applicable. Data requirement is not necessary for the purposes of this standard.

6/ A subchronic neurotoxicity test may be required pending the outcome of the acute neurotoxicity test.

7/ An additional chronic feeding study is required: a one year or longer dog study.

8/ An additional oncogenicity study is required: a two year rat study.

9/ Two teratology studies are required, one in rat and the other in the rabbit.

10/ A two-generation reproduction study is required in the rat.

11/ Any additional studies on EPTC must include test for clotting function and hematology in the protocol design, to better define the effects on clotting and clearly establish a no-observed-effect-level.

12/ For each test substance, a battery of tests is required to assess the potential to affect the qualitative or quantitative integrity of human genetic material. The objectives underlining the selection of a battery of tests for mutagenicity assessment are:

a. To detect, with sensitive assay methods, the capacity of a test substance to alter genetic material in cells,
b. To determine the relevance of these changes to mammals and, when mutagenic potential is demonstrated,
c. to incorporate these findings in the risk assessment for heritable effects, oncogenicity, and possibly other health endpoints.

The battery must include tests appropriate to address the following three categories of genetic effects:

a. Gene mutations,
b. Structural chromosomal aberrations,
c. Other mechanisms of mutagenicity (e.g., spindle inhibition, direct DNA damage) as appropriate for the tested chemical.

Specific battery test selection and protocol should be submitted to the Agency for comment and evaluation. Registrants are encouraged to discuss results of preliminary testing with the Agency.

13/ A teratology study (CDL:247780) submitted by Stauffer Chemical Company is pending review by the Agency.

14/ A reproduction study (CDL:249077) submitted by Stauffer Chemical Company is pending review by the Agency.

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition 1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)? 3/
§158.145 Wildlife and Aquatic Organisms					
AVIAN AND MAMMALIAN TESTING					
71-1 - Avian Oral LD_{50}	TGAI	A,B,C,D,E	No	-	Yes
71-2 - Avian Dietary LC_{50} 11/ Upland game bird	TGAI	A,B,C,D,E	Yes Partially Partially	00016527 9/ 00021834 10/ 00022361 10/	No
Waterfowl			Partially	00016539 10/	Yes
71-3 - Wild Mammal Toxicity	TGAI	A,B,C	6/	-	No
71-4 - Avian Reproduction	TGAI	A,B,C,E	6/	-	No
71-5 - Simulated and Actual Field Testing - Mammals and Birds	TEP	A,B,C,E	6/	-	No
AQUATIC ORGANISM TESTING					
72-1 - Freshwater Fish LC_{50} 11/	TGAI	A,B,C,D,E	Yes	00021834 9/	No
Coldwater Fish			Partially	00025286 10/	Yes
Warmwater Fish LC_{50}	TGAI		Partially	00021834 9/	No
			Partially	00022361 10/	Yes
			Partially	00025287 10/	Yes
			Partially	00027992 10/	Yes
			Partially	00034683 10/	Yes
			Partially	00034684 10/	Yes
			Partially	00084743 10/	Yes
72-2 - Acute LC_{50} Freshwater Invertebrates	TGAI	A,B,C,D,E	Partially Partially	00003503 05001497	Yes 5/

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition 1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)? 3/
§158.145 Wildlife and Aquatic Organisms (continued)					
72-3 - Acute LC_{50} Estuarine and Marine Organisms	TGAI	A,B,C	6/		No
72-4 - Fish Early Life Stage and Aquatic Invertebrate Life-Cycle	TGAI	A,B,C	6/	-	No
72-5 - Fish Life-Cycle	TGAI	A,B,C	6/	-	No
72-6 - Aquatic Organism Accumulation	TGAI, PAI OR Degradation Product	A,B,C	6/	-	No
72-7 - Simulated or Actual Field Testing - Aquatic Organisms	TEP	A,B,C,E,	6/	-	No

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition 1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)? 3/
§158.155 Nontarget Insect					
NONTARGET INSECT TESTING POLLINATORS:					
141-1 - Honeybee acute contact LD$_{50}$	TGAI	A,B	Yes	00036935	No
141-2 - Honeybee - toxicity of residue on foliage	TEP	A,B	n/a 4/		
141-3 - Wild bees toxicity of residues on foliage	TEP	A,B	n/a		
141-4 - Honeybee subacute feeding study	(Reserved) 7/				
141-5 - Field testing for pollinators	TEP	A,B	n/a		

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

Data Requirement	Composition 1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)? 3/
§158.155 Nontarget Insect (continued)					
NONTARGET INSECT TESTING - AQUATIC INSECTS:					
142-1 - Acute toxicity to aquatic insects	(Reserved) 8/				
142-2 - Aquatic insect life-cycle study	(Reserved) 8/				
142-3 - Simulated or actual field testing for aquatic insects	(Reserved) 8/				
143-1 thru 143-3 - NONTARGET INSECT TESTING - PREDATORS AND PARASITES	(Reserved) 8/				

TABLE A
GENERIC DATA REQUIREMENTS FOR EPTC

§158.145 Wildlife, Aquatic Organisms and §158.155 Beneficial Insects
(continued)

1/ Composition: TGAI = Technical grade of the active ingredient, PAI = Pure active ingredient, TEP = Typical end-use product.
2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food Crop; C=Aquatic, Non-Food; D=Greenhouse, Non-Food; E=Domestic Outdoor.
3/ Data must be submitted no later than 48 months from receipt of this standard.
4/ N/a: Not applicable. Data requirement is not necessary for the purposes of this standard.
5/ Mature animals were used instead of immature ones.
6/ These are second and third tier tests and are required only on a case-by-case basis.
7/ Reserved pending development of test methodology.
8/ Reserved pending decision as to whether data requirement should be established.
9/ This study fulfills the data requirement.
10/ This study must be combined with the other studies to fulfill the data requirement.
11/ Only one species is required.

III. REQUIREMENT FOR SUBMISSION OF PRODUCT-SPECIFIC DATA

Note: This chapter applies only to manufacturing-use products, not end-use products.

A necessary first step in determining which statements must appear on your product's label is the completion and submission to EPA of product-specific data* listed on the form entitled "Product Specific Data Report" (EPA Form 8580-4, Appendix III-1) to fill "gaps" identified by EPA concerning your product. Under the authority of FIFRA Section 3(c)(2)(B), EPA has determined that you must submit these data to EPA in order to register or reregister your product(s). All of these data must be submitted not later than six months after you receive this guidance document.

"Product-Specific Data Requirements for Manufacturing-Use Products" appearing in Table B permit you to determine which product-specific data you must submit. This can be done by examining the entries in the column of those tables entitled "Must Data Be Submitted Under §3(c)(2)(B)."

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*/ Product specific data pertains to data that support the formulation which is marketed; it usually includes product chemistry data and acute toxicology data.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING EPTC

Data Requirement	Composition[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]
§158.120 Product Chemistry				
Product Identity:				
61-1 - Identity of Ingredients	MP	Yes	GS0064-001 GS0064-007 GS0064-006	No
61-2 - Description of Beginning Material and Manufacturing Process	MP	Partially	GS0064-005 GS0064-006	Yes
61-3 - Discussion of Formation of Ingredients & Impurities	MP	Partially	GS0064-006 GS0064-007	Yes
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis	MP	Partially	GS0064-006 GS0064-007	Yes
62-2 - Certification of Limits	MP	Partially	GS0064-006 GS0064-007	Yes
62-3 - Analytical Methods for Enforcement of Limits	MP	Yes	GS0064-013	No
Physical and Chemical Characteristics				
63-2 - Color	MP	Yes	GS0064-002 GS0064-008	No
63-3 - Physical State	MP	Yes	GS0064-002 GS0064-008	No
63-4 - Odor	MP	Yes	GS0064-002	No
63-5 - Melting Point	MP	n/a[2]	-	
63-6 - Density, Specific Gravity and/or Bulk Density	MP	Yes	GS0064-001 GS0064-002	No

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING EPIC

Data Requirement	Composition[1/]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3/]
§158.120 Product Chemistry (continued)				
63-12 - pH	MP	Yes	GS0064-001 GS0064-002	No
63-14 - Oxidizing or Reducing Action	MP	No	-	Yes
63-15 - Flammability	MP	Yes	GS0064-001	No
63-16 - Explodability	MP	No	-	Yes
63-17 - Storage Stability	MP	Partially[4/]	GS0064-002 GS0064-008	Yes
63-18 - Viscosity	MP	Yes	GS0064-002 GS0064-008	No
63-19 - Miscibility	MP	Yes	GS0064-001 GS0064-008 GS0064-002	No
63-20 - Corrosion Characteristics	MP	Yes	GS0064-002	
Other Requirements				
64- 1 - Submittal of Samples	Choice			

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING EPTC

§158.120 Product Chemistry

1/ Composition: MP = Manufacturing-use product; Choice = Choice of several test substances determined on a case-by-case basis.

2/ N/a = Not applicable: Data requirement is not necessary for purposes of this standard.

3/ Data must be submitted no later than six months from receipt of this standard.

4/ The submitted data indicate EPTC is relatively stable; however, analyses for the active ingredients and product impurities are needed at the time of production and again after a period of one year.

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING EPIC

Data Requirement	Composition[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation		Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]
§158.135 Toxicology					
ACUTE TESTING					
81-1 - Oral LD_{50}	MP	Yes	00024547 00024548 00024549	00024550 00084437	No
81-2 - Dermal LD_{50}	MP	Yes	00024549		No
81-3 - Inhalation LC_{50}- Rat	MP	Yes	00072794		No
81-4 - Primary Eye Irritation - Rabbit	MP	Yes	00024547 00024550	00084437	No
81-5 - Primary Dermal Irritation	MP	Yes	00024550	00084437	No
81-6 - Dermal Sensitization	MP	Yes	00024549		No
81-7 - Acute Delayed	MP	Yes	-		Yes[3]

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING EPTC

§158.120 Toxicology
(continued)

1/ Composition: MP = Manufacturing-use product.
2/ Data must be submitted no later than six months from receipt of this standard.
3/ A delayed neurotoxicity test is required because EPTC is a carbamate.

V. SUBMISSION OF REVISED LABELING AND PACKAGING INFORMATION

Note: This section applies only to manufacturing-use products, not end-use products.

The Agency requires applicants for registration or reregistration to ensure that each label (1) contains accurate, complete, and sufficient instructions and precautions, reflecting the results of data concerning the product and its ingredients, and (2) incorporates labeling format and terminology which are sufficiently standardized to avoid user confusion.

As part of your application, you will be required to submit draft labeling consistent with: applicable product-specific data; the precautionary statements and use directions; and the regulations concerning classification [40 CFR §162.11(c)], packaging [40 CFR §162.16], and labeling [40 CFR §162.10, Appendix V-1 and V-2], as indicated by the following paragraphs of this section of the guidance document.

You will be informed later when you must submit the revised labeling set forth in this guidance package.

A. Label Contents

40 CFR §162.10 (Appendix V-1) requires that certain specific labeling statements must appear at certain locations on the label. This is referred to as format labeling. Specific label items listed below are keyed to Tables D, E, and F (Appendix VI-2).

Item 1. PRODUCT NAME - The name, brand, or trademark is required to be located on the front panel, preferably centered in the upper part of the panel. The name of a product will not be accepted if it is false or misleading. See Appendix V-1. [40 CFR §162.10(b)]

Item 2. COMPANY NAME AND ADDRESS - The name and address of the registrant or distributor is required on the label. The name and address should preferably be located at the bottom of the front panel or at the end of the label text. See Appendix V-1. [40 CFR §162.10(c)]

Item 3. NET CONTENTS - A net content statement is required on all labels. The preferred location is the bottom of the front panel immediately above the company name and address, or at the end of the label text. The net contents must be stated in terms of weight, expressed as avoirdupois pounds and ounces, and stated in terms of the largest suitable unit, i.e., "1 pound 10 ounces" rather than "26 ounces." In addition to the required units specified, net contents may be expressed in metric units. [40 CFR §162.10(d)]

Item 4. EPA REGISTRATION NUMBER - The registration number assigned to the pesticide product must appear on the label, preceded by the phrase "EPA Registration No.," or "EPA Reg. No." The registration number must be set in type of a size and style similar to other print on that part of the label on which it appears and must run parallel to it. The registration number and the required identifying phrase must not appear in such a manner as to suggest or imply recommendation or endorsement of the product by the Agency. [40 CFR §162.10(e)]

Item 5. EPA ESTABLISHMENT NUMBER - The EPA establishment number, preceded by the phrase "EPA Est." is the final establishment at which the product was produced, and may appear in any suitable location on the label or immediate container. It must also appear on the wrapper or outside container of the package if the EPA establishment registration number on the immediate container cannot be clearly read through such wrapper or container. [40 CFR §162.10(f)]

Item 6. INGREDIENT STATEMENT - An ingredient statement is required on the front panel and must contain the name and percentage by weight of each active ingredient and the total percentage by weight of all inert ingredients. The preferred location is immediately below the product name. The ingredient statement must run parallel with, and be clearly distinguished from, other text on the panel. It must not be placed in the body of other text. [40 CFR 162.10(g)]

Item 6A. POUNDS PER GALLON STATEMENT - For liquid agricultural formulations, the pounds per gallon of active ingredient must be indicated on the label.

Item 7. FRONT LABEL PRECAUTIONARY STATEMENTS - All labels are required to have precautionary statements grouped together on the front panel, preferably within a block outline. The table below shows the minimum type size requirements on various size labels, as set forth in the Regulations.

Size of Label on Front Panel in Square Inches	Signal Word as Required Minimum Type Size All Capitals	"Keep Out of Reach of Children" as Required
5 and under	6 point	6 point
above 5 to 10	10 point	6 point
above 10 to 15	12 point	8 point
above 15 to 30	14 point	10 point
over 30	18 point	12 point

Item 7A. CHILD HAZARD WARNING STATEMENT - All labels are required to have the statement "Keep Out of Reach of Children" located on the front panel above the signal word except where contact with children during distribution or use is unlikely. [40 CFR §162.10(h)(1)(ii)]

Item 7B. SIGNAL WORD - The signal word (Caution, Warning, or Danger) is required on the front panel immediately below the child hazard warning statement. [40 CFR §162.10 (h)(1)(i)]

Item 7C. SKULL & CROSSBONES AND WORD "POISON" - On products assigned a toxicity Category I on the basis of oral, inhalation, or dermal toxicity, the word "Poison" shall appear on the label in red on a background of distinctly contrasting color and the skull and crossbones shall appear in immediate proximity to the word poison. [40 CFR §162.10(h)(1)(i)]

Item 7D. STATEMENT OF PRACTICAL TREATMENT - A statement of practical treatment (first aid or other) shall appear on the label of pesticide products in toxicity Categories I, II, and III. [40 CFR §162.10(h)(1)(iii)]

Item 7E. REFERRAL STATEMENT - The statement "See Side (or Back) Panel for Additional Precautionary Statements" is required on the front panel for all products, unless all required precautionary statements appear on the front panel. [40 CFR §162.10(h)(1)(iii)]

Item 8. SIDE/BACK PANEL PRECAUTIONARY LABELING - The precautionary statements as listed below must appear together on the label under the heading "PRECAUTIONARY STATEMENTS." The preferred location is at the top of the side or back panel preceding the directions for use, and it is preferred that these statements be surrounded by a block outline. Each of the three hazard warning statements must be headed by the appropriate hazard title. [40 CFR §162.10 (h)(2)]

Item 8A. HAZARD TO HUMANS AND DOMESTIC ANIMALS - Where a hazard exists to humans or domestic animals, precautionary statements are required indicating the particular hazard, the route(s) of exposure and the precautions taken to avoid accident, injury or damage. [40 CFR §162.10 (h)(2)(i)]

Item 8B. ENVIRONMENTAL HAZARD - Where a hazard exists to non-target organisms excluding humans and domestic animals, precautionary statements are required stating the nature of the hazard and the appropriate precautions to avoid potential accident, injury, or damage. [40 CFR §162.10(h)(2)(ii)]

Item 8C. PHYSICAL OR CHEMICAL HAZARD

1. Flammability statement. Precautionary statements relating to flammability of a product are required to appear on the label if it meets the criteria in Appendix IV-3. The requirement is based on the results of the flashpoint determinations and flame extension tests required to be submitted for all products. These statements are to be located in the side/back panel precautionary statements section, preceded by the heading "Physical/Chemical Hazards." Note that no signal word is used in conjunction with the flammability statements.

2. Criteria for declaration of non-flammability. The following criteria will be used to determine if a product is non-flammable:

    a. A "non-flammable gas" is a gas (or mixture of gases) that will not ignite when a lighted match is placed against the open cylinder valve.

    b. A "non-flammable liquid" is one having a flashpoint greater than 350°F (177°C) as determined by the method specified in 40 CFR §163.61-8(c)(13)(ii) of Subpart D.

    c. A "non-flammable aerosol" is one which meets the following criteria:

        i. The flame extension is zero inches, using the method specified in 40 CFR §163.61-8(c)(13)(ii);

        ii. There is no flash back; and

        iii. The flashpoint of the non-volatile liquid component is greater than 350°F (177°C), determined by the method specified in 40 CFR §163.61-8(c)(13)(i).

3. Declaration of non-flammability. Products which meet the criteria for non-flammability specified above may bear the notation "non-flammable" or "nonflammable (gas, liquid, etc.)" on the label.

   It may appear as a substatement to the ingredients statement, or on a back or side panel, but shall not be highlighted or emphasized (as with an inordinately large type size) in any way that may detract from precaution.

4. Other physical/chemical hazard statements. When chemistry data submitted in accordance with 40 CFR §163.61-10(c) demonstrate hazards of a physical or chemical nature other than flammability, appropriate statements of hazard will be prescribed. Such statements may address hazards of explosivity, oxidizing or reducing capability, or mixing with other substances to produce toxic fumes.

Item 9. MISUSE STATEMENT - The following statement is required on your label: "It is a violation of Federal law to use this product in a manner inconsistent with its labeling." [40 CFR §162.10(1)(2)(ii)]

Item 10A. STORAGE AND DISPOSAL BLOCK - All labels are required to bear storage and disposal statements. These statements are developed for specific containers, sizes, and chemical content. Make certain that the statement you use pertains specifically to your product. These instructions must be grouped and appear under the heading "Storage and Disposal" in the directions for use. This heading must be set in the same type sizes as required for the child hazard warning. Refer to Appendix IV-5 for the latest specific storage and disposal product label statements.

Item 10B. DIRECTIONS FOR USE - Directions for use must be stated in terms which can be easily read and understood by the average person likely to use or to supervise the use of the pesticide. When followed, directions must be adequate to protect the public from fraud and from personal injury and to prevent unreasonable adverse effects on the environment. [40 CFR §162.10]

B. Collateral Information

Bulletins, leaflets, circulars, brochures, data sheets, flyers, and other graphic printed matter which is referred to on the label or which is to accompany the product are termed collateral labeling. Such labeling may not bear claims or representations that differ in substance from those accepted in connection with registration of the product. It should be made part of the response to this notice and submitted for review.

V. INSTRUCTIONS FOR SUBMISSION

All applications prepared in response to this Notice should be addressed as follows:

Mr. Robert J. Taylor
Product Manager 25
Registration Division (TS-767)
Office of Pesticide Programs
Environmental Protection Agency
Washington, D.C. 20460
Telephone: 703/557-1800

For each product for which continued registration is desired:

1. Within 90 days from receipt of this document, you must submit the "FIFRA Section 3(c)(2)(B) Summary Sheet," EPA Form 8580-1. Refer to Appendix II-2 with appropriate attachments.

2. Within 6 months from receipt of this document registrants must submit:

   a. Confidential Statement of Formula, EPA Form 8570-4.

   b. Product Specific Data Report, EPA Form 8580-4 (Appendix III-1).

   c. Two copies of any required product-specific data.

3. Within the time set forth in Table A, all generic data must be submitted by the affected registrant(s).

Note: If for any reason any required test is delayed or aborted so that meeting the agreed submission time will be delayed, notify the Product Manager listed above.

You will be informed at a later date when you must submit your Application for Amended Pesticide Registration (EPA Form 8570-1) and the revised labeling set forth in this guidance package.

Guide to Use of This Bibliography

1. CONTENT OF BIBLIOGRAPHY. This bibliography contains citations of all studies considered relevant by EPA in arriving at the positions and conclusions stated elsewhere in the Standard. Primary sources for studies in this bibliography have been the body of data submitted to EPA and its predecessor agencies in support of past regulatory decisions. Selections from other sources including the published literature, in those instances where they have been considered, will be included.

2. UNITS OF ENTRY. The unit of entry in this bibliography is called a "study." In the case of published materials, this corresponds closely to an article. In the case of unpublished materials submitted to the Agency, the Agency has sought to identify documents at a level parallel to the published article from within the typically larger volumes in which they were submitted. The resulting "studies" generally have a distinct title (or at least a single subject), can stand alone for purposes of review, and can be described with a conventional bibliographic citation. The Agency has attempted also to unite basic documents and commentaries upon them, treating them as a single study.

3. IDENTIFICATION OF ENTRIES. The entries in this bibliography are sorted numerically by "Master Record Identifier," or MRID, number. This number is unique to the citation, and should be used at any time specific reference is required. It is not related to the six-digit "Accession Number" which has been used to identify volumes of submitted studies; see paragraph 4(d)(4) below for a further explanation. In a few cases, entries added to the bibliography late in the review may be preceded by a nine-character temporary identifier. These entries are listed after all MRID entries. This temporary identifier number is also to be used whenever specific reference is needed.

4. FORM OF ENTRY. In addition to the Master Record Identifier (MRID), each entry consists of a citation containing standard elements followed, in the case of material submitted to EPA, by a description of the earliest known submission. Bibliographic conventions used reflect the standards of the American National Standards Institute (ANSI), expanded to provide for certain special needs.

   a. Author. Whenever the Agency could confidently identify one, the Agency has chosen to show a personal author. When no individual was identified, the Agency has shown an identifiable laboratory or testing facility as author. As a last resort, the Agency has shown the first submitter as author.

b. Document Date. When the date appears as four digits with no question marks, the Agency took it directly from the document. When a four-digit date is followed by a question mark, the bibliographer deduced the date from evidence in the document. When the date appears as (19??), the Agency was unable to determine or estimate the date of the document.

c. Title. In some cases, it has been necessary for Agency bibliographers to create or enhance a document title. Any such editorial insertions are contained between square brackets.

d. Trailing Parentheses. For studies submitted to the Agency in the past, the trailing parentheses include (in addition to any self-explanatory text) the following elements describing the earliest known submission:

   (1) Submission Date. The date of the earliest known submission appears immediately following the word "received."

   (2) Administrative Number. The next element, immediately following the word "under," is the registration number, experimental use permit number, petition number, or other administrative number associated with the earliest known submission.

   (3) Submitter. The third element is the submitter, following the phrase "submitted by." When authorship is defaulted to the submitter, this element is omitted.

   (4) Volume Identification (Accession Numbers). The final element in the trailing parentheses identifies the EPA accession number of the volume in which the original submission of the study appears. The six-digit accession number follows the symbol "CDL," standing for "Company Data followed by an alphabetic suffix which shows the relative position of the study within the volume. For example, within accession number 123456, the first study would be 123456-A; the second, 123456-B; the 26th, 123456-Z; and the 27th, 123456-AA. Library." This accession number is in turn followed by an alphabetic suffix which shows the relative position of the study within the volume. For example, within accession umber 123456, the first study would be 123456-A; the second, 123456-B; the 26th, 123456-Z; and the 27th, 123456-AA.

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Appendix II-2

OMB Approval No. 2000-0468 (Expires 12-31-83)

FIFRA SECTION 3(C)(2)(B) SUMMARY SHEET	**EPA REGISTRATION NO.**
PRODUCT NAME	
APPLICANT'S NAME	**DATE GUIDANCE DOCUMENT ISSUED**

With respect to the requirement to submit "generic" data imposed by the FIFRA section 3(C)(2)(B) notice contained in the referenced Guidance Document, I am responding in the following manner:

☐ 1. I will submit data in a timely manner to satisfy the following requirements. If the test procedures I will use deviate from (or are not specified in) the Registration Guidelines or the Protocols contained in the Reports of Expert Groups to the Chemicals Group, OECD Chemicals Testing Programme, I enclose the protocols that I will use:

☐ 2. I have entered into an agreement with one or more other registrants under FIFRA section 3(C)(2)(B)(ii) to satisfy the following data requirements. The tests, and any required protocols, will be submitted to EPA by:

NAME OF OTHER REGISTRANT

☐ 3. I enclose a completed "Certification of Attempt to Enter Into an Agreement with Other Registrants for Development of Data" with respect to the following data requirements:

☐ 4. I request that you amend my registration by deleting the following uses (this option is not available to applicants for new products):

☐ 5. I request voluntary cancellation of the registration of this product. (This option is not available to applicants for new products.)

REGISTRANT'S AUTHORIZED REPRESENTATIVE	**SIGNATURE**	**DATE**

EPA Form 8580-1 (10-82)

Appendix II-3

OMB Approval No. 2000-0468 (Expires: 12-31-83)

CERTIFICATION OF ATTEMPT TO ENTER INTO AN AGREEMENT WITH OTHER REGISTRANTS FOR DEVELOPMENT OF DATA

(To qualify, certify ALL four items)

1. I am duly authorized to represent the following firm(s) who are subject to the requirements of a Notice under FIFRA Section 3(c)(2)(B) contained in a Guidance Document to submit data concerning the active ingredient:

GUIDANCE DOCUMENT DATE

ACTIVE INGREDIENT

NAME OF FIRM	EPA COMPANY NUMBER

(This firm or group of firms is referred to below as "my firm".)

2. My firm is willing to develop and submit the data as required by that Notice, if necessary. However, my firm would prefer to enter into an agreement with one or more other registrants to develop jointly, or to share in the cost of developing, the following required items or data:

3. My firm has offered in writing to enter into such an agreement. Copies of the offers are attached. That offer was irrevocable and included an offer to be bound by an arbitration decision under FIFRA Section 3(c)(2)(B)(iii) if final agreement on all terms could not be reached otherwise. This offer was made to the following firm(s) on the following date(s):

NAME OF FIRM	DATE OF OFFER

However, none of those firm(s) accepted my offer.

4. My firm requests that EPA not suspend the registration(s) of my firm's product(s), if any of the firms named in paragraph (3) above have agreed to submit the data listed in paragraph (2) above in accordance with the Notice. I understand EPA will promptly inform me whether my firm must submit data to avoid suspension of its registration(s) under FIFRA Section 3(c)(2)(B). (This statement does not apply to applicants for new products.) I give EPA permission to disclose this statement upon request.

TYPED NAME	SIGNATURE	DATE

A Form 8580-6 (10-82)

Appendix IV-1

PRODUCT SPECIFIC DATA REPORT

EPA Registration No.________________Guidance Document for____________________________

Date____________________________

Registration Guideline No.	Name of Test	Test not required for my product listed above (check below)	I am complying with data requirements by		(For EPA Use Only) Accession Numbers Assigned
			Citing MRID#	Submitting Data (Attached)	
§158.20 PRODUCT CHEMISTRY					
61-1	Identity of ingredients				
61-2	Statement of composition				
61-3	Discussion of formation of ingredients				
62-1	Preliminary analysis				
62-2	Certification of limits				
62-3	Analytical methods for enforcement limits				
63-2	Color				
63-3	Physical state				
63-4	Odor				
63-5	Melting point				
63-6	Boiling point				
63-7	Density, bulk-density, or specific gravity				
63-8	Solubility				
63-9	Vapor pressure				
63-10	Dissociation constant				

Appendix IV-1
(continued)

PRODUCT SPECIFIC DATA REPORT

EPA Registration No.________________Guidance Document for__________________________

Date__________________________

Registration Guideline No.	Name of Test	Test not required for my product listed above (check below)	I am complying with data requirements by		(For EPA Use Only) Accession Numbers Assigned
			Citing MRID#	Submitting Data (Attached)	
63-12	pH				
63-13	Stability				
63-14	Oxidizing/reducing reaction				
63-15	Flammability				
63-16	Explodability				
63-17	Storage stability				
63-18	Viscosity				
63-19	Miscibility				
63-20	Corrosion characteristics				
63-21	Dielectric breakdown voltage				
§158.135 TOXICOLOGY					
81-1	Acute oral LD-50, rat				
81-2	Acute dermal LD-50				
81-3	Acute inhalation, LC-50 rat				
81-4	Primary eye irritation, rabbit				
81-5	Primary dermal irritation				
81-6	Dermal sensitization				

LABELING REQUIREMENTS OF THE FIFRA, AS AMENDED

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
1	Product name	All products	Front panel	Center front panel	
2	Company name and address	All products	None	Bottom front panel or end of label text	If registrant is not the producer, must be qualified by "Packed for . . .," "Distributed by. . .," etc.
3	Net contents	All products	None	Bottom front panel or end of label text	May be in metric units in addition to U.S. units
4	EPA Est. No.	All products	None	Front panel	Must be in similar type size and run parallel to other type.
5	EPA Reg. No.	All products	None	Front panel, immediately before or following Reg. No.	May appear on the container instead of the label.
6A	Ingredients statement	All products	Front panel	Immediately following product name	Text must run parallel with other text on the panel.
6B	Pounds/gallon statement	Liquid products where dosage given as lbs. ai/unit area	Front panel	Directly below the main ingredients statement	
7	Front panel precautionary statements	All products	Front panel		All front panel precautionary statements must be grouped together, preferably blocked.
7A	Keep Out of Reach of Children (Child hazard warning)	All products	Front panel	Above signal word	Note type size requirements.
7B	Signal word	All products	Front panel	Immediately below child hazard warning	Note type size requirements.

APPENDIX V-2 (continued).

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
7C	Skull & crossbones and word POISON (in red)	All products which are Category I based on oral, dermal, or inhalation toxicity	Front panel	Both in close proximity to signal word	
7D	Statement of practical treatment	All products in Categories I, II, and III	Category I: Front panel unless referral statement is used. Others: Grouped with side panel precautionary statements.	Front panel for all.	
7E	Referral statement	All products where precautionary labeling appears on other than front panel.	Front panel		
8	Side/back panel precautionary statements	All products	None	Top or side of back panel preceding directions for use	Must be grouped under the headings in 8A, 8B, and 8C; preferably blocked.
8A	Hazards to humans and domestic animals	All products in Categories I, II, and III	None	Same as above	Must be preceded by appropriate signal word.
8B	Environmental hazards	All products	None	Same as above	Environmental hazards include bee caution where applicable.

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
8C	Physical or chemical hazards	All pressurized products, others with flash points under 150°F	None	Same as above	
9A	Restricted block	All restricted products	Top center of front panel	Preferably blocked	Includes a statement of the terms of restriction. The words "RESTRICTED USE PESTICIDE" must be same type size as signal word.
9C	Misuse statement	All products	Immediately following statement of classification or ahead of directions for use		
10A	Re-entry statement	All cholinesterase inhibitors	In the directions for use	Immediately after misuse statement	
10C	Storage and disposal block	All products	In the directions for use	Immediately before specific directions for use or at the end of directions for use	Must be set apart and clearly distinguishable from from other directions for use.
10D U.S.	Directions for use	All products	None	None	May be in metric as well as U.S. units

Appendix V-3

PHYSICAL-CHEMICAL HAZARDS

Criteria	Required Label Statement
I. Pressurized Containers	
A. Flashpoint at or below 20°F; or if there is a flashback at any valve opening.	Extremely flammable. Contents under pressure. Keep away from fire, sparks, and heated surfaces. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
B. Flashpoint above 20°F and not over 80°F; or if the flame extension is more than 18 inches long at a distance of 6 inches from the valve opening.	Flammable. Contents under pressure. Keep away from heat, sparks, and flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
C. ALL OTHER PRESSURIZED CONTAINERS	Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
II. Non-Pressurized Containers	
A. Flashpoint at or below 20°F.	Extremely flammable. Keep away from fire, sparks, and heated surfaces.
B. Flashpoint above 20°F and over 80°F.	Flammable. Keep away from heat and open flame.
C. Flashpoint over 80°F and not over 150°F.	Do not use or store near heat and open flame.
D. Flashpoint above 150°F.	None required.

STORAGE AND DISPOSAL INSTRUCTIONS FOR PESTICIDES

All products are required to bear specific label instructions about storage and disposal. Storage and disposal instructions must be grouped together in the directions for use portion of the label under the heading STORAGE AND DISPOSAL. Products intended solely for domestic use need not include the heading "STORAGE AND DISPOSAL." The STORAGE AND DISPOSAL heading must appear in the minimum type size listed below:

Size of label front panel in square inches	Required type size for the heading STORAGE AND DISPOSAL (all capitals)
10 and under	.6 point
Above 10 to 15	.8 point
Above 15 to 30	10 point
Over 30	12 point

Storage and disposal instructions must be set apart and clearly distinguishable from other directions for use. Blocking storage and disposal statements with a solid line is suggested as a means of increasing their prominence.

A. Storage Instructions:

All product labels are required to have appropriate storage instructions. Specific storage instructions are not prescribed. Each registrant must develop his own storage instructions, considering, when applicable, the following factors:

1. Conditions of storage that might alter the composition or usefulness of the pesticide. Examples could be temperature extremes, excessive moisture or humidity, heat, sunlight, friction, or contaminating substances or media.

2. Physical requirements of storage which might adversely affect the container of the product and its ability to continue to function properly. Requirements might include positioning of the container in storage, storage or damage due to stacking, penetration of moisture, and ability to withstand shock or friction.

3. Specifications for handling the pesticide container, including movement of container within the storage area, proper opening and closing procedures (particularly for opened containers), and measures to minimize exposure while opening or closing container.

4. Instructions on what to do if the container is damaged in any way, or if the pesticide is leaking or has been spilled, and precautions to minimize exposure if damage occurs.

5. General precautions concerning locked storage, storage in original container only, and separation of pesticides during storage to prevent cross-contamination of other pesticides, fertilizer, food, and feed.

6. General storage instructions for household products should emphasize storage in original container and placement in locked storage areas.

B. Pesticide Disposal Instructions:

The label of all products, except those intended solely for domestic use, must bear explicit instructions about pesticide disposal. The statements listed below contain the exact wording that must appear on the label of these products:

1. The labels of all products, except domestic use, must contain the statement, "Do not contaminate water, food, or feed by storage or disposal."

2. Except those products intended solely for domestic use, the labels of all products that contain active ingredients appearing on the "Acutely Hazardous" Commercial Pesticide Products List (RCRA "E" List) at the end of this appendix or are assigned to Toxicity Category I on the basis of oral or dermal toxicity, skin or eye irritation potential, or Toxicity Category I or II on the basis of acute inhalation toxicity must bear the following pesticide disposal statement:

   "Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

   The labels of all products, except those intended for domestic use, containing active or inert ingredients that appear on the "Toxic" Commercial Pesticide Products List (RCRA "F" List) at the end of this appendix or presently meet any of the criteria in Subpart C, 40 CFR 261 for a hazardous waste must bear the following pesticide disposal statement:

"Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

Labels for all other products, except those intended for domestic use, must bear the following pesticide disposal statement:

"Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility."

3. Products intended for domestic use only must bear the following disposal statement: "Securely wrap original container in several layers of newspaper and discard in trash."

C. Container Disposal Instructions

The label of each product must bear container disposal instructions appropriate to the type of container.

1. All products intended for domestic use must bear one of the following container disposal statements:

Container Type	Statement
Non-aerosol products (bottles, cans, jars)	Do not reuse container (bottle, can, jar). Rinse thoroughly before discarding in trash.
Non-aerosol products (bags)	Do not reuse bag. Discard bag in trash.
Aerosol products	Replace cap and discard containers in trash. Do not incinerate or puncture.

2. The labels for all other products must bear container disposal instructions, based on container type, listed below:

Container Type	Statement
Metal containers (non-aerosol)	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.
Plastic containers	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.
Glass containers	Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other approved state and local procedures.

Container Type	Statement
Fiber drums with liners	Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by state and local authorities. If drum is contaminated and cannot be reused[1], dispose of in the same manner.
Paper and plastic bags	Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.
Compressed gas cylinders	Return empty cylinder for reuse (or similar wording).

[1] Manufacturer may replace this phrase with one indicating whether and how fiber drum may be reused.

3. The labels for all other products must bear container disposal instructions, based on container type, listed on the first page of this Appendix.

Pesticides that are hazardous wastes under 40 CFR 261.33(e) and (f) when discarded.

"Acutely Hazardous" Commercial Pesticides (RCRA "E" List) Active Ingredients, (no inerts):

Acrolein
Aldicarb
Aldrin
Allyl alcohol
Aluminum phosphide
4-Aminopyridine
Arsenic acid
Arsenic pentoxide
Arsenic trioxide
Calcium cyanide
Carbon disulfide
p-Chloroaniline
Cyanides (soluble cyanide salts, not specified elsewere)
Cyanogen chloride
2-Cyclohexyl-4,6-dinitrophenol
Dieldrin
0,0-Diethyl S-[2-ethylthio)ethyl] phosphorodithioate
    (disulfoton, Di-Syston)
0,0-Diethyl 0-pyrazinyl phosphorothioate (Zinophos)
Dimethoate
0,0-Dimethyl 0-p-nitrophenyl phosphorothioate (methyl parathion)
4,6-Dinitro-o-cresol and salts
4,6-Dinitro-o-cyclohexylphenol
2,4 Dinitrophenol
Dinoseb
Endosulfan
Endothall
Endrin
Famphur
Fluoroacetamide
Heptachlor
Hexanethyl tetraphosphate
Hydrocyanic acid
Hydrogen cyanide
Methomyl
alpha-Naphthylthiourea (ANTU)
Nicotine and salts
Octamethylpyrophosphoramide (OMPA, schradan)
Parathion

"Acutely Hazardous" Commercial Pesticides (RCRA "E" List) Active Ingredients continued:

Phenylmercuric acetate (PMA)
Phorate
Potassium cyanide
Propargyl alcohol
Sodium azide
Sodium cyanide
Sodium fluoroacetate
Strychnine and salts
0,0,0,0-Tetraethyl dithiopyrophosphate (sulfotepp)
Tetraethyl pyrophosphate
Thallium sulfate
Thiofanox
Toxaphene
Warfarin
Zinc phosphide

There are currently no inert ingredients for commercial pesticides on the "Acutely Hazardous" List (RCRA "E" List).

"Toxic" Commercial Pesticide Products (RCRA "F" List) Active Ingredients:

Acetone
Acrylonitrile
Amitrole
Benzene
Bis(2-ethylhexyl)pthalate
Cacodylic acid
Carbon tetrachloride
Chloral (hydrate)
Chlordane (technical)
Chlorobenzene
4-Chloro-m-cresol
Chloroform
o-Chlorophenol
4-Chloro-o-toluidine hydrochloride
Creosote
Cresylic acid
Cyclohexane
Decachlorooctahydro-1,3,4-metheno-2H-cyclobuta[c,d]-pentalen-2-one
    (kepone, chlordecone)
1,2-Dibromo-3-chloropropane (DBCP)
Dibutyl phthalate
S-3,3-(Dichloroallyl diisopropylthiocarbamate (diallate, Avadex)
o-Dichlorobenzene
p-Dichlorobenzene
Dichlorodifluoromethane (Freon 12®)
3,5-Dichloro-N-(1,1-dimethyl-2-propynyl) benzamide (pronamide,Kerb)
Dichloro diphenyl dichloroethane (DDD)
Dichloro diphenyl trichloroethane (DDT)
Dichlorethyl ether
2,4-Dichlorophenoxyacetic, esters and salts (2,4-D)
1,2-Dichloropropane
1,3-Dichloropropane (Telone)
Dimethyl phthalate
Ethyl acetate
Ethyl 4,4'-dichlorobenzilate (chlorobenzilate)
Ethylene dibromide (EDB)
Ethylene dichloride
Ethylene oxide
Formaldehyde
Furfural
Hexachlorobenzene
Hexachlorocyclopentadiene
Hexachloroethane
Hydrofluoric acid

"Toxic" Commercial Pesticide Products (RCRA "F" List) Active Ingredients:

Isobutyl alcohol
Lead acetate
Lindane
Maleic hydrazide
Mercury
Methyl alcohol
Methyl bromide
Methyl chloride
2,2'-Methylenebis (3,4,6-trichlorophenol) (hexachlorophene)
Methylene chloride
Methyl ethyl ketone
4-Methyl-2-pentanone (methyl isobutyl ketone)
Naphthalene
Nitrobenzene
p-Nitrophenol
Pentachloroethane
Pentachloronitrobenzene (PCNB)
Pentaclorophenol
Phenol
Phosphorodithioic acid, 0,0-diethyl, methyl ester
Propylene dichloride
Pyridine
Resorcinol
Safrole
Selenium disulfide
Silvex
1,2,4,5-Tetrachlorobenzene
1,1,2,2-Tetrachloroethane
Tetrachloroethylene
2,3,4,6-Tetrachlorophenol
Thiram
Toluene
1,1,1-Trichloroethane
Trichloroethylene
Trichloromonofluoromethane (Freon 11®)
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)
Xylene

"Toxic" Commercial Pesticide Products (RCRA "F" List)
Inert Ingredients:

Acetone
Acetonitrile
Acetophenone
Acrylic acid
Aniline
Benzene
Chlorobenzene
Chloroform
Cyclohexane
Cyclohexanone
Dichlorodifluoromethane (Freon 12®)
Diethyl phthalate
Dimethylamine
Dimethyl phthalate
1,4-Dioxane
Ethylene oxide
Formaldehyde
Formic acid
Isobutyl alcohol
Meleic anhydride
Methyl alcohol (methanol)
Methyl ethyl ketone
Methyl methacrylate
Naphthalene
Saccharin and salts
Thiourea
Toluene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichlorofluoromethane (Freon 11®)
Vinyl chloride
Xylene

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

CERTIFIED MAIL

SUBJECT: Initiation of Reregistration Process for Manufacturing-Use Products and Certain End-Use Products Containing EPTC as the Single Active Ingredient

Dear Registrant:

In accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, EPA's Office of Pesticide Programs has begun the reregistration process for pesticide products containing the subject ingredient. Significant changes to the statute were made in 1972, 1975, and 1978; thus, current requirements may be substantially different from those in effect at the time your product(s) were registered. The first phase of reregistration requires that you (1) make a commitment to the Agency regarding data development and (2) subsequently submit revised product labeling and associated information.

This mailing contains the Guidance Document for preparation of submissions, as well as a listing of your affected product(s) (Attachment A), and a separate list of registrants with products subject to this manufacturing-use standard and which contain this active ingredient (Attachment B). The latter list is for the purpose of cooperative data development.

The Guidance Document sets out the Agency's evaluation of all available data pertaining to the subject chemical and its registered uses, and its rationale for the regulatory actions being taken at this time. Additionally, the Guidance Document contains instructions describing certain of the steps you must take to maintain registration for your product(s). Products not brought into compliance with the Guidance Document as supplemented by subsequent information from EPA about compliance with certain data support requirements will be subject to suspension and/or cancellation.

Specifically, the enclosed Guidance Document does the following:

1. Introduces the purpose of this document.
2. Explains the Agency's policy regarding data submission and identifies, in table format, the data that must be submitted to complete the Agency's evaluation of each product. In addition, a bibliography identifying the data which is considered part of the data base supporting the registration standard is included.
3. Sets out time-frames for submission of required data.
4. Explains how to revise labeling for maufacturing use products. (As the Guidance Document explains, labeling is not required at this time.)
5. Provides submission instructions.

Because of the variety and complexity of the requirements, and the short statutory time-frames available for certain actions, it is essential that you understand the specific requirements and procedures in order that you may respond in a correct and timely manner. Since a part of these requirements is under Section 3(c)(2)(B) of FIFRA, your first response may be required within 90 days from receipt of this letter. Please note that if you do not respond or do not comply fully with the requirements, your application may be rejected or your product registration cancelled or suspended.

If, after reviewing this material, you do not understand what you must do or how or when you must respond, please contact the Product Manager listed below who will assist you in every reasonable way. If you wish to discuss the data requirements or request that certain data be waived, you must write to the Agency and indicate those data requirements with which you take issue and your rationale for doing so. After the Agency has had a chance to review your submission, the Product Manager will contact you to set up a meeting for the purpose of resolving all issues relative to data requirements.

Please note that this guidance document will eventually be supplemented by EPA with additional information about compliance with data support requirements. In Monsanto v. Administrator, EPA was recently enjoined by the District Court for the Eastern District of Missouri from implementing in any way the "mandatory data licensing" aspects of §3(c)(1)(D) of FIFRA. EPA is assessing the implications of the injunction for the reregistration process. Because of this unresolved situation, EPA has decided to proceed with the requirements in this guidance package which do not relate to the "data licensing" issue and to supplement the package with additional guidance when circumstances permit.

If you have any questions concerning this Guidance Document, you may contact the Product Manager listed below:

Mr. Robert J. Taylor
Product Manager 25
Registration Division (TS-767)
Office of Pesticide Programs
Environmental Protection Agency
Washington, D.C. 20460
Telephone: 703/557-1800

Sincerely,

Douglas D. Campt, Director
Registration Division (TS-767)

Enclosure

ATTACHMENT A

PRODUCTS AFFECTED BY THIS REREGISTRATION PROCESS

Following is a list of your products affected by this reregistration process. If this list is incomplete or inaccurate in any way, please notify the Product Manager (PM) identified in the letter.